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MEMOIRS VAN DIE BOTANIESE OPNAME VAN SUID-AFRIKA

No. 43

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THE BRYOPHYTES of SOUTHERN AFRICA

AN ANNOTATED CHECKLIST

R. E. MAGILL & E. A. SCHELPE

BOTANICAL RESEARCH INSTITUTE · DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES · REPUBLIC OF SOUTH AFRICA

NAVORSINGSINSTITUUT VIR PLANTKUNDE · DEPARTEMENT VAN LANDBOU-TEGNIESE DIENSTE · REPUBLIEK VAN SUID-AFRIKA

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AN ANNOTATED CHECKLIST

by

R. E. MAGILL & E. A. SCHELPE

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DEPARTMENT OF AGRICULTURAL TECHNICAL SERVICES-DEPARTEMENT VAN LANDBOU-TEGNIESE DIENSTE

SOUTH AFRICA-SUID-AFRIKA

1979

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FOREWORD

It was with great pleasure that I received the manuscript of this checklist which, I trust, will be the forerunner of a volume on the mosses for the Flora of Southern Africa. It has been a longstanding ideal to produce a modern handbook to replace Sim's valuable, but now outmoded treatment of this plant group.

When Dr Peter Raven, the Director of the Missouri Botanical Garden, U.S.A., visited South Africa on the occasion of the opening of the new building of the Botanical Research Institute in 1973, he showed an interest in collecting mosses for his colleague Dr M. R. Crosby. This prompted me to inform him of the Institute's need for a trained bryologist. In due course Dr Raven recommended the young and enthusiastic Dr Robert Magill as a possible candidate for this post. It was our good fortune that Dr Magill accepted the post, and in 1976 he and his family arrived in South Africa. That this checklist, which lays the foundation of the moss volume for the Flora, was completed in less than two years, augurs well for the completion of the main work, especially when it is considered that a complete reorganization of the herbarium and the checking of every specimen was necessary before it could be finalized.

Prof. E. A. Schelpe, the co-author of the work, has had a long association with the cryptogamic flora of Southern Africa and from the beginning showed a keen interest in this work. I warmly thank him for his contribution.

The four objectives set out in the Introduction have to a degree already been satisfied, and I am sure that the wish of the authors to elicit suggestions and criticisms from other researchers will be richly rewarded and will benefit the final account of the mosses of this sub-continent, which is in preparation. We look forward to the final volume on the mosses with keen anticipation.

B. DE WINTER
Director: Botanical Research Institute

Pretoria
1 October 1978

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ABSTRACT

MAGILL, R. E. & SCHELPE, E. A., 1979. The bryophytes of southern Africa. An annotated checklist. *Mem. bot. Surv. S. Afr.* No. 43, pp. 38.

The checklist includes a listing of families, genera and species of the bryophytes in the southern African Flora. In all, 316 hepatics and 591 moss species in 282 genera and 87 families are recognized. The checklist is presented with families in systematic order, while genera and species are arranged alphabetically under their respective families or genera. Several taxa are reported for Africa or the southern African Flora for the first time. The 278 annotations provide references to recent literature, information on new records or notes on distribution, taxonomy and/or nomenclature for many of the taxa. A list of synonomy and excluded species and alphabetical lists of southern African families and genera are included. *Dicranoloma* **entabeniense** sp. nov., *Timmiella* **pelindaba** sp. nov., *Ptychomitrium* **diexaratum** sp. nov. and *Pterobryopsis* **rehmannii** sp. nov. are described and illustrated from southern Africa. Twenty-one new combinations are made.

UITTREKSEL

Die kontrolelys bevat 'n lys van families, genera en soorte van die bryophyta in die Suider-Afrikaanse flora. Altesaam 316 lewermosse en 591 mossoorte in 282 genera en 87 families word erken. Die families is gerangskik in sistematiese rangorde, terwyl genera en soorte alfabeties gerangskik is onder hulle onderskeie families of genera. Verskeie taksa word vir die eerste keer aangeteken vir Afrika of die Suider-Afrikaanse flora. 278 annotasies verskaf verwysings na onlangse literatuur, inligting oor nuwe rekords of notas oor verspreiding, taksonomie en/of nomenklatuur vir baie van die taksa. 'n Lys van sinonimie en uitgeslote soorte en alfabetiese lyste van Suider-Afrikaanse families en genera word ook ingesluit. *Dicranoloma* **entabeniense** sp. nov., *Timmiella* **pelindaba** sp. nov., *Ptychomitrium* **diexaratum** sp. nov. en *Pterobryopsis* **rehmannii** sp. nov. word beskryf en illustreer vanuit Suider-Afrika. Een en twintig nuwe kombinasies word ook aangebied.

RÉSUMÉ

La liste de contrôle présentée ici inclut les familles, genres et espèces de bryophytes de la flore d'Afrique australe. Un total de 316 espèces d'hépatiques et 591 de mousses y est reconnu, dans 282 genres et 87 familles. Dans cette liste de contrôle, les familles sont arrangées par ordre systématique, les genres de chaque famille et les espèces de chaque genre se suivent en ordre alphabétique. Plusieurs taxa sont mentionnés pour la première fois en Afrique ou dans la flore d'Afrique australe. Les 278 notes qui accompagnent cette liste donnent des références bibliographiques récentes, signalent les observations nouvelles et fournissent des détails sur la distribution, la taxonomie et/ou la nomenclature de beaucoup de ces taxa. On trouvera également une liste des synonymes et espèces exclues ainsi que des listes alphabétiques des genres et familles de l'Afrique australe. De cette dernière région sont décrites et illustrées les nouvelles espèces suivantes: Dicranoloma **entabeniense**; Timmiella **pelindaba**; Ptychomitrium **diexaratum**; *et* Pterobryopsis **rehmannii.** *Vingt-et-une combinaisons nouvelles sont opérées.*

1. INTRODUCTION

In 1926, Sim introduced his work on the bryophytes of southern Africa with a history of bryological exploration and publications. Three checklists (Shaw, 1878; Sim, 1915; Wager, 1917) are discussed in the introduction that were of primary importance in the preparation of Sim's text. During the 52 years since the publication of The Bryophytes of Southern Africa, a revised checklist for the flora has not been published. Numerous recent publications have substantially modified Sim's concepts of the southern African bryophyte flora, thus making a new checklist necessary.

Several of these recent publications have been revisions dealing in part with southern African taxa (Robinson, 1970; Ochi, 1972; Snider, 1975; Vander Berghen, 1976; Touw, 1976; Lewinsky, 1978). In addition, many new species and distributional records have been published for Africa (Robinson, 1959, 1963; Bizot, 1967; De Sloover, 1977) and for the southern hemisphere (Schelpe, 1969, 1975; Stone & Schelpe, 1973). Furthermore, Schelpe (in press) has updated the nomenclature used by Sim (1926), in a synthesis of *"Africa* 4" records from Index Muscorum (Wijk *et al.*, 1959–1969).

Unfortunately, all the supplementary data presented to date has not overcome the inherent weaknesses and misconceptions incorporated in the original text. Consequently, the absence of a readily available, workable and reliable flora for southern Africa still exists.

The checklist has been compiled with the idea of satisfying four objectives, while providing a reference for current floristic research on southern African bryophytes. The first objective is to introduce nomenclatural and taxonomic alterations revealed during research associated with the reorganization and renovation of the T. R. Sim Bryophyte Collection (PRE). This research has been substantially enhanced by the simultaneous examination of bryological collections from other southern African herbaria (BOL, NH, NBG, STE and WIND) and specific specimens or collections from several overseas herbaria (MO, S, H-BR and NY).

Second, to identify taxa requiring further research and areas of the flora that need additional data before they can be effectively treated. Although Sim and other early collectors made a good survey of the flora, large parts of southern Africa have yet to be explored or thoroughly collected. This is emphasized by the large number of species, described from southern Africa, that are still represented only by the type collections. In this respect, several recent, extensive collections of southern African bryophytes have provided a great deal of important ecological and phytogeographical information, generally lacking from most early collections.

The third objective is to provide a current, updated list of the bryophytes of southern Africa. It should be emphasized that this list was compiled, not only as a curatorial tool, but with the idea of soliciting suggestions and criticisms from other researchers interested in the flora or taxa represented in southern Africa.

The fourth objective is fulfilled by the preceding three, that is to provide a basis for a Prodromus of Southern African Mosses. The scope of the Prodromus and this Checklist will include the area treated in the Flora of Southern Africa project (South Africa, South West Africa, Swaziland, Lesotho and Botswana). In addition, the checklist will also include bryophytes from adjoining areas (Rhodesia, Moçambique and Angola) that were treated by Sim (1926) or Arnell (1963).

The main body of this publication consists of a checklist, comprising 316 liverwort and 591 moss species in 282 genera and 87 families. The checklist is supplemented with a list of synonomy and species excluded from the flora, annotations to the checklist and synonomy and alphabetical lists of genera and families represented in the flora.

Assistance from the curators of the herbaria mentioned above in obtaining access to their collections or with loans of important collections is acknowledged with thanks. We also thank Dr H. R. Tölken for the Latin descriptions.

2. NEW SPECIES AND COMBINATIONS

MUSCI AUSTRO-AFRICANI

This chapter, dealing with the nomenclature and taxonomy of southern African mosses, represents the first of a series of papers to be published under the title Musci Austro-africani. Four new species are described and illustrated, and 21 new combinations are made, that are necessary for the publication of the following checklist.

2.1 NEW SPECIES

Dicranoloma entabeniense *Magill,* sp. nov., a *D. billardiero* cellulis folii non porosis, breve rectangularis et cellulis alaribus oblongis differt.

Plantae laxe caespitosae. *Caules* erecti, usque ad 60 mm alti. *Folia* appressa apicibus flexuosis in sicco, madefacta patentia, ovata vel oblonga, subulata ad apices, 5,0–5,5 mm longa, quoque margine hyalina base ad paene apicem, 2–6 cellulae lata, costa breve excurrens, dentata ad apicem. *Cellulae folii* subquadratae vel breve rectangulares, non porosae, seriales plus minusve sinuatae longitudinales, cellulis alaris amplificatis, coloratis. *Sporophytum* non vidi.

Plants in lax tufts. *Stems* erect, to 60 mm tall, branched above, central strand absent. *Leaves* appressed with flexuose tips when dry, erect-spreading when wet; ovate to oblong, subulate above, 5,0–5,5 mm long; base weakly auriculate; margins entire, plane below, convolute above; hyaline border extending from base to near apex, 2–6 cells wide below; costa shortly excurrent, toothed at tip, in section with 6 guide cells, dorsal cells slightly smaller than guide cells, dorsal surface with single stereid row, ventral stereid band 2 cells thick, exposed. *Leaf cells* smooth; apical cells subquadrate; median cells shortly rectangular, non porose, extending to base juxtacostally, arranged in ±longitudinal rows; border cells long-linear, hyaline; alar cells enlarged, reddish-brown, rectangular, extending to costa or cells near costa narrow not enlarged, upper row of alar cells quadrate. *Sporophyte* not seen. Fig. 1–8.

Type.—Entabeni Forest Soutpansberg, northern Transvaal, South Africa, *Bottomley* PRE-CH3381 (PRE, holo.; H; L; MO; NY).

The narrow costa, differientiated alar cells, bordered leaves and smooth leaf cells place this species in *Dicranoloma.* It is distinct from the other southern African species, *D. billardieri* (Brid.) Par., by its non-porose, shortly rectangular leaf cells and oblong alar cells.

Timmiella pelindaba *Magill,* sp. nov., *T. cameruniae* affinis, sed forma et longitudine foliorum, marginibus planis et seta longa recta; speciebus aliis africanis plantis dioicis, annulo bene evoluto et dentibus peristomii rectis differt.

Plantae gregariae, atrovirides. *Caules* erecti, c. 5 mm alti. *Folia* crispa in sicco, madefacta late patentio vel recurvata, ligulata a basis ovalis, 3,5–4,5 mm longa, apicibus acutis, marginibus planis serratis ad apices; costa bene evoluta subpercurrens; lamina bistratosa untrinque costae, cellulis ventralibus mammillosis, cellulis dorsalibus extensis latitudini dimidiae laminae et levitibus.

Dioica. *Seta* rutila recta in sicco et madefacto, 12 mm longa; capsula cylindrica, 2 mm longa, annulo bene evoluto; dentes peristomii recti, longe filiformes, 350–400 mm longa, tubo basali brevissimo; operculum rostratum; calyptra cucullata.

Plants gregarious, terricolous, dark green. *Stems* short, to 5 mm tall, reddish-brown, central strand present. *Leaves* crisped with involute margins when dry, widespreading to recurved with plane margins when wet; ligulate, 3,5–4,5 mm long, 0,8 mm wide; apex acute; lamina ±constricted above short oval base; margins irregularly serrate in distal ⅔, smooth below; costa strong, wide below, subpercurrent, in section round, with 4 guide cells, dorsal stereid band 3–4 cells thick, dorsal surface layer of substereid cells, ventral stereid band small, 1–2 cells thick, surface cells similar to ventral lamina cells. Lamina bistratose juxtacostally; ventral cells quadrate, 10 μm, mammillose; dorsal cells extending ½ way to margin, c. 15 cells each side of costa, in section ½ height of ventral cells, smooth; basal cells lax, oblong-hexagonal, thin walled, 55–60 μm long. Axillary hairs composed of 6–8 cylindrical cells, hyaline throughout.

Dioicous. *Perichaetial leaves* not differientied. *Seta* reddish, straight wet or dry, 12 mm long; capsule reddish-yellow, cylindrical, 2 mm long, exothecial cells oblong, annulus well developed, persistent; peristome teeth straight (not twisted), long-filiform, 350–400 μm high, ±smooth, reddish-yellow, connected at base and forming a very short tube; operclum long rostrate, 1 mm long; calyptra cucullate, 3,5 mm long; spores not seen. Fig. 9–19.

Type.—Pelindaba, Transvaal, South Africa, *Bosman* PRE-CH1607 (PRE, holo.; H; L; MO; NY).

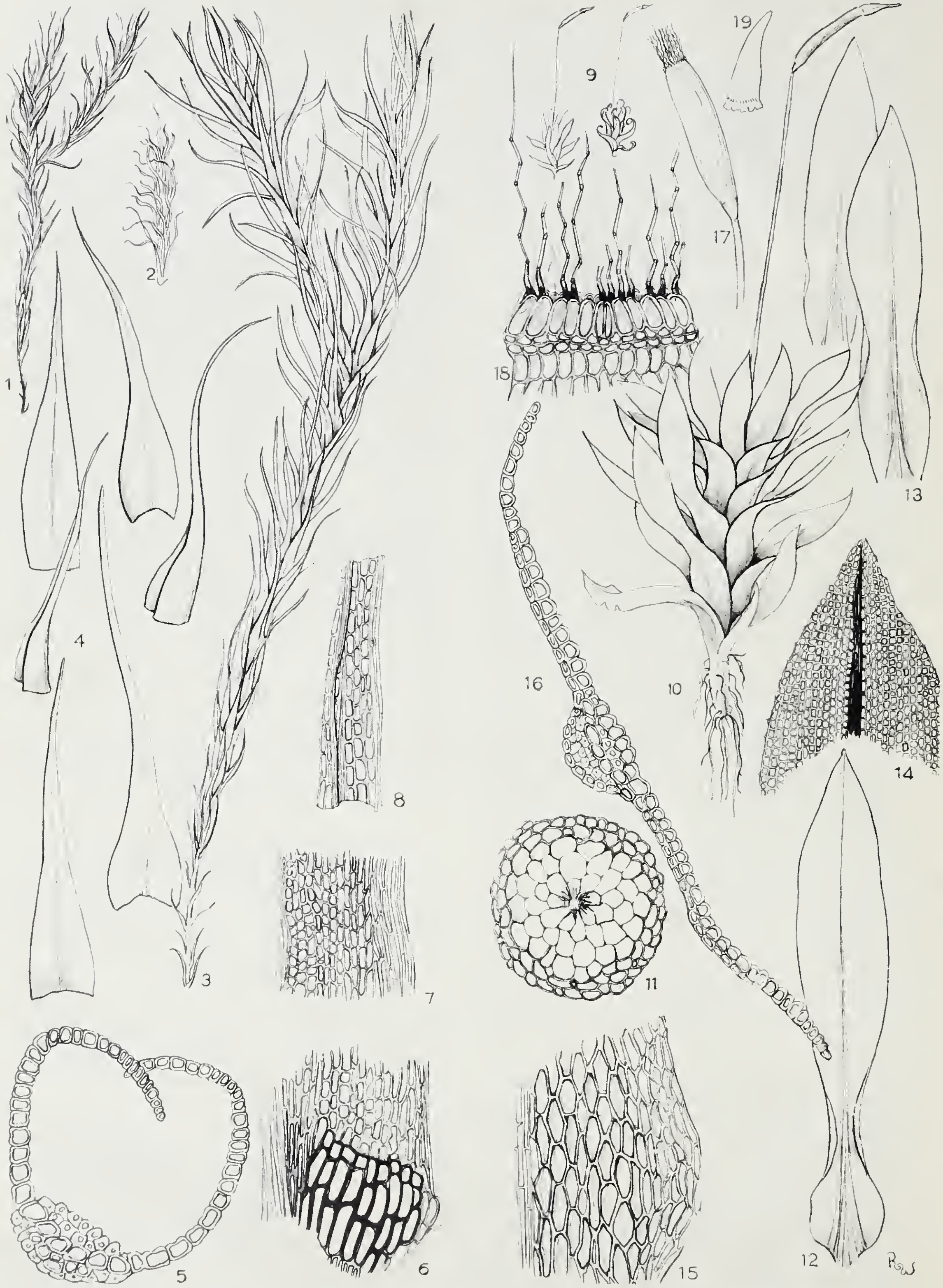
Near *T. cameruniae* Broth., but differing in leaf shape and length, plane margins, and seta length and straightness. *Timmiella pelindaba* differs from other African species in being dioicous, having a well-developed annulus and straight peristome teeth.

Ptychomitrium diexaratum *Magill*, sp. nov., *P. exaratifolio* affinis, sed cellulae folii dorsalis mammilliformes et aequantes cellulas ventrales, sic paginae duae longitudine sulcatae differt. Addite, apex folii solum infirme cucullatus, basis folii ovata, peristomium irregulare et perforatum et sporae multo parviores sunt.

Plantae dense caespitosae, saxicolae. *Caules* erecti, 10–15 mm alti. *Folia* circinata supra in sicco, madefacta late patentia supra bases, ovato-acuminata, 4–5 mm longa, apicibus infirme cucullatis, basibus supra basim cellulis dorsalibus et ventralibus plus minusve aqualibus quadratis et valde mammillosis in pagina exposita.

Cryptoicum. *Seta* lateralis per innovatione, 2 mm longa; capsula ovoidea, 1 mm longa; dentes peristomii irregulares, perforati, papillosi; operculum rostratum; calyptra mitriformis, omnino tengens capsulam; sporae rotundae vel angulares, 12–18 μm, verrucatae.

Plants in dense tufts, saxicolous, yellowish-green. *Stems* erect, 10–15 mm tall, reddish-brown, central strand present. *Leaves* circinate above when dry, wide spreading above base when wet; ovate acuminate, 4–5 mm long; apex acute, weakly cucullate; base clasping, hyaline; margins plane, entire; costa percurrent, in section flattened, with 6–8 guide cells, dorsal stereid band 2–3 cells thick, cells on dorsal surface ±substereids with conspicuously thickened



Figs 1–8.—**Dicranoloma entabeniense.** 1, Habit, × 1,2; 2, Branch dry, × 1,2; 3, Habit, × 3; 4, Leaves, × 12; 5, Mid-leaf cross section, × 240; 6, Leaf base and alar cells, × 100; 7, Lower leaf showing cells and border, × 100; 8, Upper leaf showing cells and border, × 100. Figs 9–19.—**Timmiella pelindaba.** 9, Habit, wet and dry, × 1,2; 10, Habit, × 10; 11, Stem cross section, × 120; 12, Leaf, × 20; 13, Leaves, × 20; 14, Leaf apex, × 100; 15, Leaf base, × 120; 16, Mid-leaf cross section, × 350; 17, Capsule, × 15; 18, Capsule mouth, annulus and peristome, × 100; 19, Operculum, × 20.

outer walls, ventral stereid band 1(2) cell thick, surface cells similar to ventral lamina cells. *Lamina* bistratose above base, dorsal and ventral cells equal in size, quadrate, 7–10 μm, mammillose on exposed surfaces; basal cells lax, oblong, hyaline, incrassate.

Cryptoicous. *Perigonial leaves* short, ovate, acute, 1 mm long; perichaetial leaves not differientied. *Seta* laterial through innovation, 2 mm long, yellow; capsule ovoid, 1 mm long, yellow; peristome teeth reddish-yellow, irregular, strongly perforated throughout, papillose; operculum rostrate, to 1 mm long; calyptra mitriform, 2,5 mm long, completely covering capsule; spores round to angular, 12–18 μm, verrucate. Fig. 20-32

Type.—In crevices of wet sandstone cliffs, grassland, alt. 2 400 m, Sehlabathebe National Park, Lesotho, *Magill* 4308 (PRE, holo.; H; L; MO; NY).

Near *P. exaratifolium* Robins., but differing in the development of the dorsal leaf cells, that results in both dorsal and ventral leaf surfaces being "longitudinally furrowed". In addition, the leaf apex is only weakly cucullate, leaf base ovate, peristome strongly perforated and spores smaller.

Pterobryopsis rehmannii *Magill,* sp. nov., *P. mexicanae* affinis, sed magnitudine parva, foriis caulis serrulatis, turma magna cellulae alaris et cellulis folii non porosis differt.

Plantae magnae, nitidae. *Caulis* primarius repens, nudus; caulis secundus erectus, usque ad 60 mm altus, dense foliatus ad basim, ramosus supra. *Folia* laxe imbricata; folia caulis concava, late ovata, plus minusve 2 mm longa, quoque margine serrulata ad apicem; costa singularis supra medio folii; cellulae folii mediani elongate sexangulares, non porosae; cellulae alaris numerosae, quadratae, incrassatae; folia rami concava, ovalia, plus minusve 1,5 mm longa, quoque margine supra serrato; costa singularis ad usque medium folii. *Sporophytum* non vidi.

Plants large, glossy. *Primary stems* creeping, filiform, naked or with fragile scale leaves. *Secondary stems* erect, to 60 mm, densely foliate to base, pinnately branched above, branches to 15 mm long. *Leaves* laxly imbricate; stem leaves concave, broadly ovate, 2,0–2,2 mm long, 1,5 mm wide; apex acute; base weakly decurrent; margins plane, serrulate at apex; costa single, slender, ending in upper leaf. *Median leaf cells* ±elongate-hexagonal, 55–60 μm long, smooth walled; basal cells rarely, weakly pitted; alar cells numerous, quadrate, ±incrassate. *Branch leaves* concave, oval, 1,2–1,8 mm long, 1 mm wide; apex acute; margins plane, serrate above; costa single, ending above mid-leaf. *Gemmae* axilary, cylindrical, 6–8 cells long, incrassate. *Sporophyte* not seen. Fig. 33–41.

Type.—Natal, South Africa, *Buchanan* s.n. [Rehmann, *Musci Austro-africani* 615 (NH, holo.!; BM)].

Near *Pterobryopsis mexicana* (Ren. & Card.) Fleisch., but differing in smaller overall size, serrulate stem leaves, larger alar group and non porose leaf cells.

This plant has been discussed under Rehmann's name, *P. natalensis nom. nud.*, by Dixon & Gepp (1923), Brotherus (1924–1925) and Sim (1926), but it has never been validly published. Examination of the specimen [*Buchanan* s.n. (*Rehmann* 615)] from Natal Herbarium indicated that it was an undescribed species and the only record of *Pterobryopsis* from Africa.

2.2 NEW COMBINATIONS

FISSIDENTACEAE

Fissidens simii *Schelpe,* nom. nov.

Fissidens aristatus Sim in Trans. R. Soc. S. Afr. 15: 200 (1926), non Broth. in Proc. Linn Soc. N.S. Wales 41: 578 (1916). Syntypes: Natal, *Sim* 9903, 9907, 9909, 1916 (PRE !).

DICRANACEAE

Campylopus simii *Schelpe,* nom. nov.

Campylopus pseudojulaceus Sim in Trans. R. Soc. S. Afr. 15: 169 (1926), non C. Muell. in Bull. Herb. Boissier 6: 38 (1898). Type: Orange Free State, *Rehmann* 58 (*Musci Austro-africani.* PRE, holo. !).

POTTIACEAE

Barbula umtaliensis *Magill,* nom. nov.

Tortella obtusifolia Dixon in S. Afr. J. Sci. 18: 311–312. (1922). Type: Umtali, Rhodesia, *Eyles* 1741, (PRE, iso. !); non *Barbula obtusifolia* Schwaegr., *Spec. Musc. Suppl.* 1: 129 (1811).

The complete lack of differentiation in the basal leaf cells of the short lingulate, obtuse leaves is not characteristic of *Tortella.* In addition, the "long tubular perichaetium" clearly indicates *Barbula* subgen. *Streblotrichum* (P. Beauv.) Saito. A *nom. nov.* is required for this taxon since, on transfer to *Barbula,* the specific epithet has already been used in *B. obtusifolia* Schwaegr. (1811).

Barbula zambesiaca *Magill,* nom. nov.

Semibarbula elongata Hilpert in Beih. Bot. Zbl. 50 (2): 626 (1932). (for *Barbula elongata* Dixon in S. Afr. J. Sci. 18: 314. 1922, non *B. elongata* Wils. in Mitt. in Hooker, J. Bot. Kew Gdn Misc. 3: 51. 1851). Syntypes: Danger Point, Victoria Falls, Rhodesia, *Sim* 8495, 8497, 8498 (PRE, iso. !).

Saito (1975) considered *Semibarbula* congeneric with *Barbula.* Examination of the southern African species previously treated under *Semibarbula* indicated their relationship to *Barbula.* A *nom. nov.* is required for this taxon since, on transfer to *Barbula* the specific epithet has already been used in *B. elongata* Wils. (1851).

Didymodon ligulatus (*Sim*) *Magill,* comb. nov.

Gymnostomum ligulatum Sim in Trans. R. Soc. S. Afr. 15: 260 (1926). Type: Lechlaba, Transvaal, South Africa, *Rehmann* 437 (*Musci Austro-africani*), (PRE, holo. !; BM; BOL !; NH !).

Although the sporophyte of this species is not known, several characters (size, absence of central strand in stem, axillary hair type and leaf cells) indicate that placement in *Didymodon* is more satisfactory.

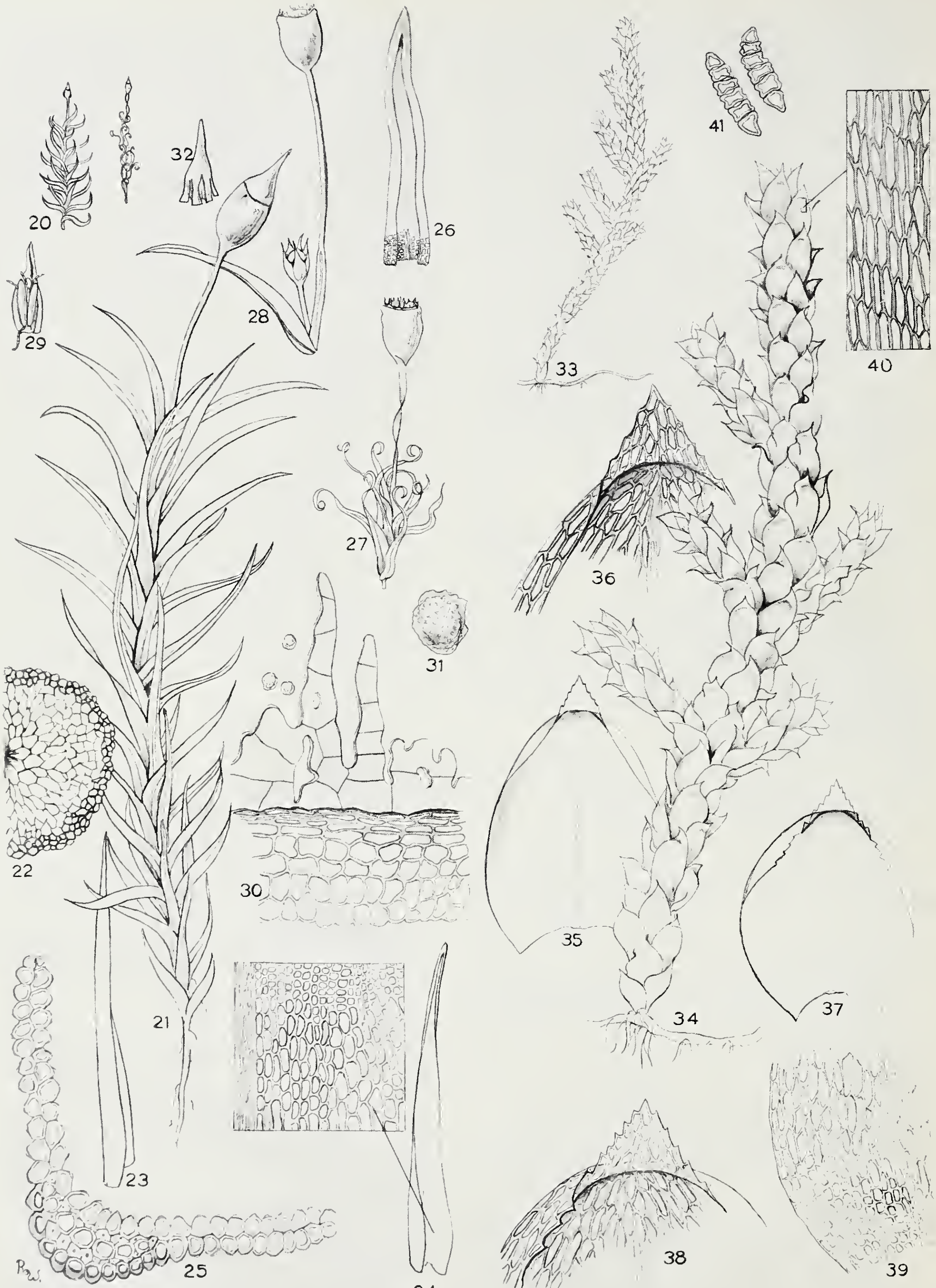
Didymodon xanthocarpus (*C. Muell.*) *Magill,* comb. nov.

Barbula xanthocarpa C. Mueller in Linnaea 17: 581 (1843). Type: Zwartkops River, Cape, South Africa, *Ecklon* s.n.

The transfer to *Didymodon* is made on the bases of costal anatomy and differentiation of the basal cells of the axillary hairs.

Gymnostomum wageri *Schelpe,* nom. nov.

Gymnostomum gracile Dixon in Trans. R. Soc. S. Afr. 8: 191 (1920), non (R. Br.) Hook., *Musci Exot.* 1: 22 (1818). Type: Pretoria, *Wager* 97 (PRE, iso. !).



Figs 20–32.—**Ptychomitrium diexaratum.** 20, Habit, wet and dry, ×1,2; 21, Habit, ×10; 22, Stem cross section, ×100; 23, Leaf, ×5; 24, Leaf, ×15, and leaf cells at upper base, ×100; 25, Mid-leaf cross section, ×280; 26 Leaf apex, ×50; 27, Sporophyte and upper leaves, dry, ×10; 28, Sporophyte showing perigonial branch inside perichaetial leaf, ×10; 29, Perigonial leaf with antheridia and paraphyses, ×12; 30, Capsule mouth, peristome teeth and spores, ×180; 31, Spore, ×1000; 32, Calyptra, ×5. Figs 33–41.—**Pterobryopsis rehmannii.** 33, Habit, ×1,2; 34, Habit, ×2,5; 35, Stem leaf, ×25; 36, Stem leaf apex, ×75; 37, Branch leaf, ×25; 38, Branch leaf apex, ×75; 39, Branch leaf base and alar cells, ×75; 40, Upper median leaf cells, ×100; 41, Gemmae, ×180.

Husnotiella latifolia (*Dix.*) *Zander & Magill,* comb. nov.

Gyroweisia latifolia Dixon in S. Afr. J. Sci. 18: 309–310. (1922). Type: Victoria Falls, Rhodesia, *Sim* 8931, (BM, holo; PRE, iso. !). *Gyroweisia amplexicaulis* Sim, *syn. nov.* in Trans. R. Soc. S. Afr. 15: 250 (1926).

Examination of type material indicated an incorrect generic placement for *G. latifolia.* Zander (*in litt.*) confirmed this, suggesting a close relationship to the American species *H. obtusifolia* (Broth.) Zander. The southern African species is also distinct in producing multicellular gemmae in the leaf axils (not originally described).

Weissia opaca (*Dix.*) *Magill,* comb. nov.

Tortella opaca Dixon in S. Afr. J. Sci. 18: 311. (1922). Syntypes: Victoria Falls, Rhodesia, *Sim* 8890, 8884 (BM; PRE !).

The differentiation of the leaf base is not representative of the condition presently ascribed to *Tortella.* Although the sporophyte is not known, the small plants, linear-channelled leaves and widely involute margins clearly indicate its relationship to *Weissia.*

EPHEMERACEAE

Ephemerum nervosum (*Dix.*) *Schelpe,* comb. nov.

Ephemerella nervosa Dixon in Trans. R. Soc. S. Afr. 18: 254 (1929). Type: King William's Town, Cape, *Wager* 809 (BM, holo; BOL !; PRE !).

The genus *Ephemerella* is now considered congeneric with *Ephemerum.*

FUNARIACEAE

The separation of *Entosthodon* is frequently useful in dealing with apparently distinct groups on a regional basis; on a wider scale, however, the intergradation between *Funaria* and *Entosthodon* is unmistakable. Adoption of the broader interpretation of *Funaria* employed by Brotherus (1924–1925) makes the following two new names necessary.

Funaria harveyana *Magill,* nom. nov.

Entosthodon cavifolius Mitten in Harvey, *Thesaur. Cap.* 1: 63. (1859), non *Funaria cavifolius* Card. & Broth. in K. Svensk. Vet. Ak. Handl. 63: 33 (1923). Type: Cape of Good Hope, *Menzies* s.n.

A *nom. nov.* is required for this taxon since, on transfer to *Funaria* the specific epithet has already been used in *F. cavifolius* Card. & Broth. (1923).

Funaria urceolata (*Mitt.*) *Magill,* comb. nov.

Entosthodon urceolatus Mitten in Harvey, *Thesaur Cap.* 1: 63· (1859). Type: Cape of Good Hope, *Rooper* s.n.

BRYACEAE

Bryum simii *Schelpe,* nom. nov.

Bryum acuminatum Sim in Trans. R. Soc. S. Afr. 15: 336 (1926), *non* (Hopp. & Hornsch.) B.S.G., *Bryol. Eur.* 4: 91 (1839). Type: Cathkin, Natal, *Owen* 15 (PRE, holo. !).

The following three new names are necessary, since the species of *Webera* Ehrh. ex Lindb., *hom. illeg.*, are now treated under *Pohlia* Hedw.

Pohlia depauperata (*Sim*) *Schelpe,* comb. nov.

Webera depauperata Sim in Trans. R. Soc. S. Afr. 15: 323 (1926). Type: Giant's Castle, Natal, *Symons* s.n. (*Sim* 10208; PRE, holo. !).

Pohlia macleai (*Sim*) *Schelpe,* comb. nov.

Webera macleai Sim in Trans. R. Soc. S. Afr. 15: 323 (1926). Type: Rhenosterberg, *Maclea* s.n. (*Rehmann* 548, *Musci Austro-africani*; PRE, holo. !; BOL !).

Pohlia simii *Schelpe,* nom. nov.

Webera revoluta Sim in Trans. R. Soc. S. Afr. 15: 324 (1926), non Card. in Bull. Soc. Bot. Geneve, ser 2, 1: 125 (1909). Type: Houtbosch, Transvaal, *Rehmann* 566 (*Musci Austro-africani*; PRE, holo. !).

A *nom. nov.* is required for this taxon since, on transfer to *Pohlia*, the specific epithet has already been used in *P. revoluta* Card. (1909).

PLAGIOTHECIACEAE

Stereophyllum woodii (*Sim*) *Magill,* comb. nov.

Porothamnium woodii Sim in Trans. R. Soc. S. Afr. 15: 404. (1926). Type: Natal, South Africa, *Wood* 285 (GRA, holo; PRE, iso. !).

Examination of Sim's specimens clearly indicates the relationship of this species to *Stereophyllum.* The presence of a teniole and the leaf shape separates *S. woodii* from the other species in southern Africa.

SEMATOPHYLLACEAE

A study of southern African species of *Sematophyllum* and *Rhaphidorrhynchium* indicated that a broader generic concept should be adopted, uniting all the species under *Sematophyllum.* The following combinations are therefore necessary.

Sematophyllum dregei (*C. Muell.*) *Magill,* comb. nov.

Hypnum dregei C. Mueller, *Syn. Musc.* II: 311–312 (1851). Syntypes: *Prom. Bon. Spei, Drège* s.n.; Philipstown, *Gueinzius* s.n.; Zwellendam, *Pappe* s.n.; *Rhaphidorrhynchium dregei* (C. Muell.) Broth., *syn. nov.* in Pflanzenfam. 11: 427 (1925).

Sematophyllum gueinzii (*Hampe*) *Magill,* comb. nov.

Hypnum gueinzii Hampe, *Icon. Musc.* 12 (1844). Type: *Prom. Bon. Spei, Drège* s.n.; *Rhaphidorrhynchium gueinzii* (Hampe) Broth., *syn. nov.*, Pflanzenfam. 11: 428 (1925).

Sematophyllum zuluense (*Sim*) *Magill,* comb. nov.

Rhaphidorrhynchium zuluense Sim in Trans. R. Soc. S. Afr. 15: 438 (1926). Type: Ngoya, Zululand, *Sim* 10285 (PRE, holo. !).

HYPNACEAE

Ectropothecium brachycarpum (*Dix.*) *Magill,* comb. nov.

Isopterygium brachycarpum Dixon in Trans. R. Soc. S. Afr. 8: 218 (1920). Syntypes: South Africa, *Wager* 234, 512 (BM, PRE !). *Ectropothecium brevisetum* Dixon, *hom. illeg.*, *syn nov.*, in S. Afr. J. Sci. 18: 334 (1922).

Examination of type material indicates that a transfer of *I. brachycarpus* Dix. to *Ectropothecium* is necessary on the bases of sporophyte and the perichaetial leaf characters. Specimens placed under *E. brevisetus* Dix. *hom. illeg.* also belong here.

Mittenothamnium ctenidioides (*Dix.*) *Schelpe,* comb. nov.

Microthamnium ctenidioides Dixon, in Trans. R. Soc. S. Afr. 8: 217 (1920). Type: Near Hogsback, Cape, *Henderson & Henderson* 220 (BM, holo; PRE !).

The new combination is necessary, because the species of *Microthamnium* Mitt. *hom. illeg.* are now treated under *Mittenothamnium* Henn.

3. CHECKLIST OF SOUTHERN AFRICAN BRYOPHYTES

As stated in the Introduction, the main emphasis of the current bryological research at the Botanical Research Institute is directed toward a flora project for the *Musci*. However, because no current list exists, the *Hepaticae* have also been included.

Following generally accepted practices, this checklist takes a conservative approach. The arrangement employed by Sim has, however, been greatly modified to embrace current thought in bryological systematics.

The arrangement of the liverworts is after Arnell (1963), although his concepts have been substantially modified through reference to recent treatments by Grolle (1976), Koponen *et al.* (1977) and Stotler & Crandall-Stotler (1977), in addition to several recent revisions cited in the annotations.

The family arrangement and generic placement of the mosses is after Crosby & Magill (1977). Other arrangements were recently published by Crum *et al.* (1973) and Koponen *et al.* (1977).

Each family is numbered, *Hepaticae* (H1–H35), *Anthocerotícae* (A1) and *Musci* (1–83). For a complete list of families, see Grolle (1972A) for the liverworts and hornworts; Crosby & Magill (1977) for the mosses. The numbers following individual taxa refer to an annotation, *vide* p. 26.

3.1 *HEPATICAE*

TARGIONIACEAE (H1)

CYATHODIUM *Kunze*
- africanum *Mitt.*
- aureonitens (*Griff.*) *Mitt.*
- foetidissimum *Schiff.*

TARGIONIA *L.*
- hypophylla *L.*
- lorbeeriana *K. Muell.*

AYTONIACEAE (H2) 1

ASTERELLA *P. Beauv.*
- angolensis (*Steph.*) *S. Arnell*
- bachmannii (*Steph.*) *S. Arnell*
- marginata (*Nees*) *S. Arnell*
- muscicola (*Steph.*) *S. Arnell*
- wilmsii (*Steph.*) *S. Arnell*

MANNIA *Opiz*
- capensis (*Steph.*) *S. Arnell*

PLAGIOCHASMA *Lehm. & Lindenb.* 2
- appendiculatum *Lehm. & Lindenb.* 3
- beccarianum *Steph.* 4
- eximium (*Schiffn.* in *Steph.*) *Steph.*
- microcephalum (*Steph.*) *Steph.*
- rupestre (*Forst.*) *Steph.*

REBOULIA *Raddi*
- hemisphaerica (*L.*) *Raddi*

LUNULARIACEAE (H3)

LUNULARIA *Adans.*
- cruciata (*L.*) *Dum.*

EXORMOTHECACEAE (H4)

EXORMOTHECA *Mitt.*
- holstii *Steph.*
- megastomata *Marquand*
- pustulosa *Mitt.*

CLEVEACEAE (H5)

ATHALAMIA *Falc.*
- spathysii (*Lindb.*) *Hattori*

MARCHANTIACEAE (H6)

DUMORTIERA *Nees*
- hirsuta (*Sw.*) *Nees*

MARCHANTIA *L.*
- berteroana *Lehm. & Lindenb.*
- parviloba *Steph.*
- polymorpha *L.*
- wilmsii *Steph.*

OXYMITRACEAE (H7)

OXYMITRA *Bisch.*
- cristata *Garside*

RICCIACEAE (H8)

RICCIA *L.* 5
- albolimbata *S. Arnell*
- albomarginata *Bisch.*
- albosquamata *S. Arnell*
- angolensis *Steph.*
- atropurpurea *Sim*
- bullosa *Steph.*
- canescens *Steph.*
- capensis *Steph.*
- cavernosa *Hoffm.*
- chrystallina *L.*
- compacta *Garside*
- concava *Bisch.*
- coronata *Sim*
- crozalsii *Lev.*
- cupulifera *A. V. Duthie*
- curtisii (*Aust.*) *James*
- fluitans *L.*
- garsidei *Sim*
- limbata *Bisch.*
- montaguensis *S. Arnell*
- natalensis *Sim*
- okahandjana *S. Arnell*
- personii *Khan*
- pottsiana *Sim*
- purpurascens *Lehm. & Lindenb.*
- rhodesiae *S. Arnell*
- rubricollis *Garside & Duthie* in *S. Arnell*
- runssorensis *Steph.*
- sorocarpa *Bisch.*
- spongosa *S. Arnell*
- stricta *A. V. Duthie*
- villosa *Steph.*
- volkii *S. Arnell*
- warnstorfii *Limpr.*

RICCIOCARPOS *Corda*
- natans (*L.*) *Corda*

SPHAEROCARPACEAE (H9)

SPHAEROCARPOS *Boeh.*
    stipitatus *Bisch.* ex *Lindenb.*

RIELLACEAE (H10)

RIELLA *Mont.*
    affinis *M. A. Howe & Underw.*
    alatospora *Wigglesw.*
    capensis *Cav.*
    echinospora *Wigglesw.*
    purpureospora *Wigglesw.*

CODONIACEAE (H11) 6

FOSSOMBRONIA *Raddi*
    capensis *S. Arnell*
    crispa *Nees*
    densilamellata *S. Arnell*
    montaguensis *S. Arnell*
    pusilla (*L.*) *Dum.*
    spinifolia *Steph.*
    tumida *Mitt.*
    zeyheri *Steph.*

ANEURACEAE (H12) 7

RICCARDIA *S. Gray*
    capensis *S. Arnell*
    compacta (*Steph.*) *S. Arnell*
    fastigiata (*Lehm.*) *Trev.*
    limbata (*Steph.*) *E. Jones*
    obtusa *S. Arnell*
    pseudopinguis *Herz.*
    rhodesiae *S. Arnell*
    saccatiflora (*Steph.*) *S. Arnell*
    stephanii (*Besch.*) *E. Jones*

METZGERIACEAE (H13)

METZGERIA *Raddi*
    camerunensis *Steph.*
    capensis *S. Arnell*
    elliotii *Steph.*
    leptoneura *Spruce* 8
    limbatosetosa *Steph.*
    madagassa *Steph.*
    muscicola *Steph.*
    nudifrons *Steph.*
    perrotana *Steph.*
    quadrifaria *Steph.*
    saxbyi *Pears.*
    tabularis *Steph.*
    violacea (*Ach.*) *Dum.*

PALLAVICINIACEAE (H14) 9

PALLAVICINIA *S. Gray*
    lyellii (*Hook.*) *S. Gray* 10
    stephanii *Jack*

SYMPHYOGYNA *Nees & Mont.*
    harveyana *Tayl.*
    lehmanniana *Nees & Mont.*
    podophylla (*Thunb.*) *Nees & Mont.*
    rhizobola (*Schwaegr.*) *Nees*

RADULACEAE (H15)

RADULA *Dum.* 11
    boryana (*Web.*) *Nees*
    holstiana *Steph.*
    lindbergiana *Gott.*
    recurvifolia *Steph.*
    stipatiflora *Steph.*
    tabularis *Steph.*
    tubaeflora *Steph.*
    vaginata *Steph.*

PORELLACEAE (H16)

PORELLA *L.*
    capensis (*Gott.*) *Steph.*
    hohnelliana *Steph.*
    matongae (*Herz.*) *E. Jones*
    triquetra (*Steph.*) *E. Jones* 12
    vallis-gratiae (*Gott.*) *S. Arnell*

JUBULACEAE (H17) 13

FRULLANIA *Raddi* 14
    andersonii *Angstr.*
    arecae (*Spreng.*) *Gott.*
    brunnea (*Spreng.*) *Gott.*
    caffraria *Steph.*
    capensis *Gott.*
    depressa *Mitt.*
    diptera (*Lehm. & Lindenb.*) *Gott., Lindenb. & Nees*
    ericoides (*Nees*) *Mont.*
    lindenbergii *Lehm.*
    obscurifolia *Mitt.*
    serrata *Gott.*
    socotrana *Mitt.*
    spongiosa *Steph.*
    trinervis (*Lehm. & Lindenb.*) *Gott., Lindenb. & Nees*
    variegata *Steph.*

LEJEUNEACEAE (H18)

ANOMALOLEJEUNEA *Schiffn.*
    pluriplicata *Pears.*

APHANOLEJEUNEA *Evans*
    capensis (*S. Arnell*) *S. Arnell*

ARCHILEJEUNEA *Steph.*
    elobulata *Steph.*
    erronea *Steph.*

BRACHIOLEJEUNEA (*Spruce*) *Schiffn.*
    confertifolia *Steph.*
    tristis *Steph.*

CAUDALEJEUNEA *Steph.*
    hanningtonii (*Mitt.*) *Schiff.*

- CHEILOLEJEUNEA (*Spruce*) *Schiffn.*
  - convexa (*S. Arnell*) *S. Arnell*
  - inflata *Steph.*
- COLOLEJEUNEA (*Spruce*) *Schiffn.*
  - cardiocarpa (*Nees & Mont.*) *Schust.* 15
  - dissita *E. Jones*
  - malanjae *Steph.*
  - minutissima (*Sm.*) *Schiffn.*
  - mocambiquensis *S. Arnell*
  - myriantha (*Herz.*) *S. Arnell*
  - oleana *Sim*
  - rosettiana (*Mass.*) *Schiffn.*
- COLURA *Dum.*
  - calyptrifolia (*Hook.*) *Dum.*
  - tenuicornis (*Evans*) *Steph.*
- DICRANOLEJEUNEA *Steph.* 16
  - chrysophylla (*Lehm.*) *Grolle*
  - madagascariensis (*Gott.*) *Steph.*
- DIPLASIOLEJEUNEA (*Spruce*) *Schiffn.*
  - cavifolia *Steph.*
  - kraussiana (*Lindenb.*) *Spruce*
- DREPANOLEJEUNEA (*Spruce*) *Schiffn.*
  - hamatifolia (*Hook.*) *Schiffn.*
  - papillosa *S. Arnell*
  - physaefolia (*Gott.*) *Steph.*
- INFLATOLEJEUNEA *S. Arnell*
  - capensis (*Gott.*) *S. Arnell*
- LEJEUNEA *Lib.*
  - arnelliana *Schust.* 17
  - caespitosa *Lindenb.*
  - ecklonii *Lindenb.*
  - elobulata *Sim*
  - flava *Sw.*
  - helenae (*Pears.*) *Steph.*
  - holtii *Spruce*
  - isomorpha *Gott.* 18
  - lamacerina *Steph.*
  - letabaensis *S. Arnell*
  - wilmsii *Steph.*
- LEPTOCOLEA *Evans*
  - crenatifolia *Steph.*
  - cristata (*Steph.*) *E. Jones*
- LEUCOLEJEUNEA *Evans*
  - rotundistipula (*Lindenb.*) *Steph.*
  - unciloba (*Lindenb.*) *Evans*
  - xanthocarpa (*Lehm. & Lindenb.*) *Evans* 19
- LOPHOLEJEUNEA (*Spruce*) *Schiffn.*
  - fragilis *Steph.*
  - subfusca (*Nees*) *Steph.*
- MARCHESINIA *S. Gray*
  - moelleriana *Pears.* 20
- MASTIGOLEJEUNEA (*Spruce*) *Schiffn.*
  - carinata (*Mitt.*) *Steph.*
  - rhodesica (*Vand. Bergh.*) *E. Jones*
- MICROLEJEUNEA *Steph.*
  - africana *Steph.*
- PHRAGMILEJEUNEA *Schust.* 21
  - molleri (*Steph.*) *Schust.*
  - pappeanus (*Nees*) *Schust.*
- PRIONOLEJEUNEA *Steph.*
  - kindbergii *Steph.*
- PTYCHANTHUS *Nees*
  - striatus (*Lehm. & Lindenb.*) *Nees*
- PTYCHOCOLEUS *Trev.*
  - pulopenangensis (*Gott.*) *Steph.*
- RECTOLEJEUNEA *Evans*
  - rhodesiae (*Sim*) *S. Arnell*
- STREPSILEJEUNEA *Steph.*
  - brevifissa (*Gott.*) *Steph.*
  - georgensis *S. Arnell*
  - krakakammae (*Lindenb.*) *Steph.*
- STYLOLEJEUNEA *Sim*
  - duncanii *Sim*
  - setacea (*Steph.*) *S. Arnell*
- TAXILEJEUNEA (*Spruce*) *Schiffn.*
  - conformis (*Nees & Mont.*) *Steph.*
  - vallis-gratiae *Steph.*
- THYSANANTHUS *Lindenb.*
  - africanus (*Sim*) *S. Arnell*

JUNGERMANNIACEAE (H19) 22

- ANASTROPHYLLUM (*Spruce*) *Steph.*
  - auritum (*Lehm.*) *Steph.*
  - gambaragarae *Gola*
  - minutum (*Schreb.*) *Schust.* 23
- CHANDONANTHUS *Mitt.*
  - hirtellus (*Weber*) *Mitt.*
- ISOTACHIS *Mitt.*
  - aspera *Steph.*
- JAMESONIELLA (*Spruce*) *Carring.*
  - colorata (*Lehm.*) *Spruce*
  - grandiflora (*Lehm. & Gott.*) *Spruce*
  - oenops (*Lehm. & Gott.*) *Steph.*
  - paludosa *Steph.*
  - purpurascens *Steph.* 19
  - rehmannii *Steph.*
- JUNGERMANNIA *L.*
  - austroafricana *S. Arnell*
  - borgenii *Gott.* ex *Pears.* 19
  - milbraedii *Steph.* 19
  - stolonifera *Steph.*
- LOPHOZIA (*Dum.*) *Dum.*
  - capensis *S. Arnell*
  - montaguensis *S. Arnell*
  - ruwenzorensis *S. Arnell*

- NOTOSCYPHUS *Mitt.*
  - belangerianus (*Lehm.*) *Mitt.* 24
  - jackii *Steph.*
  - lutescens (*Lehm. & Lindenb.*) *Mitt.*

ACROBOLBACEAE (H20) 25

- ACROBOLBUS *Nees*
  - excisus *(Mitt.) schiffn.*
- LETHOCOLEA *Mitt.*
  - congesta (*Lehm.*) *S. Arnell*
- MARSUPIDIUM *Mitt.*
  - brevifolium *Steph.*
  - limbatum (*Steph.*) *Grolle* 19

GYMNOMITRIACEAE (H21) 26

- GYMNOMITRION *Corda*
  - laceratum (*Steph.*) *Horikawa*
- MARSUPELLA *Dum.*
  - capensis *S. Arnell*
  - sparsifolia (*Lindb.*) *Dum.*
- STEPHANIELLA *Jack* 25
  - paraphyllina *Jack*

SCHISTOCHILACEAE (H22)

- SCHISTOCHILA *Dum.*
  - alata (*Lehm.*) *Steph.*
  - sphagnoides (*Schwaegr.*) *Steph.*

PLAGIOCHILACEAE (H23)

- LEPTOSCYPHUS *Mitt.*
  - diversifolia (*Gott.*) *S. Arnell*
  - expansus (*Lehm.*) *S. Arnell*
  - iversenii (*Pears.*) *Sim*
- PLAGIOCHILA (*Dum.*) *Dum.* 27
  - capensis *Steph.* 28
  - crispulocaudata *Gott.*
  - divergens *Steph.* 27, 28
  - fuscovirens *Steph.*
  - heterostipa *Steph.*
  - injasutiensis *S. Arnell* 29
  - knysnana *S. Arnell* 30
  - lastii *Mitt.*
  - lophophora *Schust.*
  - squamulosa *Mitt.* 27
  - subalpina *Steph.*
  - wilmsiana *Steph.*
- TYLIMANTHUS *Mitt.*
  - africanus *Pears.*
  - wilmsii *Steph.*

ARNELLIACEAE (H24)

- GONGYLANTHUS *Nees*
  - ericetorum (*Raddi*) *Nees*
  - reniformis (*Mitt.*) *Steph.* 31
  - scariosus (*Lehm.*) *Steph.* 31

LOPHOCOLEACEAE (H25)

- CHILOSCYPHUS *Corda*
  - dubius *Gott.*
- CLASMATOCOLEA *Spruce*
  - fasciculata (*Nees*) *Grolle*
  - vermicularis (*Lehm.*) *Grolle*
- LOPHOCOLEA (*Dum.*) *Dum.*
  - bewsii (*Sim*) *Grolle*
  - concreta *Mont.*
  - congoana *Steph.*
  - cuspidata (*Nees*) *Limpr.*
  - difformis *Nees*
  - fragrans (*Moris & De Not.*) *Gott., Lindenb. & Nees*
  - lucida (*Spreng.* ex *Lehm.*) *Mont.*
  - muricata *Nees*
  - semiteres (*Lehm.*) *Mitt.*

CEPHALOZIACEAE (H26)

- ALOBIELLA *Spruce*
  - heteromorpha (*Lehm.*) *Steph.*
  - pillansii (*Sim*) *S. Arnell*
- CEPHALOZIA (*Dum.*) *Dum.*
  - crassicaulis *Steph.*
  - robusta *Steph.*
  - vallis-gratiae *Steph.*

ADELANTHACEAE (H27) 32

- ADELANTHUS *Mitt.*
  - decipiens (*Hook.*) *Mitt.*
  - lindenbergianus (*Lehm.*) *Mitt.* 33
- ODONTOSCHISMA (*Dum.*) *Dum.*
  - africanum (*Pears.*) *Sim*

CEPHALOZIELLACEAE (H28)

- CEPHALOZIELLA (*Spruce*) *Schiffn.*
  - anthelioides *S. Arnell*
  - atroviridis (*Sim*) *S. Arnell* 34
  - capensis (*Sim*) *S. Arnell*
  - garsidei *S. Arnell*
  - kiaeri (*Aust.*) *S. Arnell*
  - lycopodiodes (*Sim*) *S. Arnell*
  - natalensis (*Sim*) *S. Arnell*
  - schelpei *S. Arnell*
  - tabularis *S. Arnell*
  - tenuissima (*Lehm. & Lindenb.*) *S. Arnell*
  - transvaalensis *S. Arnell*
  - triplicata *S. Arnell*
  - umtaliensis *S. Arnell*

ANTHELIACEAE (H29)

- ANTHELIA *Dum.*
  - africana *Steph.*

CALYPOGEJACEAE (H30)

- CALYPOGEJA *Raddi*
  - arguta *Nees & Mont.*
  - bidentula (*Weber*) *Nees*
  - fissa (*L.*) *Raddi* 35
  - fusca (*Lehm.*) *Steph.*
  - longifolia *Steph.*

LEPIDOZIACEAE (H31)

- ACROMASTIGIUM *Evans*
  - exile (*Lindenb.*) *Evans*
- ARACHNIOPSIS *Spruce*
  - diacantha (*Mont.*) *Howe*
- BAZZANIA *S. Gray* 36
  - adnexa (*Mont.*) *Trev.*
  - borbonica (*Steph.*) *Steph.*
  - decrescens (*Lehm. & Lindb.*) *Trev.*
  - molleri (*Steph.*) *S. Arnell* 37
  - nitida (*Weber*) *Grolle*
- KURZIA *Von Martens* 38
  - stephanii (*Ren.*) *Grolle*
  - succulenta (*Sim*) *Grolle*
  - tabularis (*Steph.*) *Grolle*
- LEPIDOZIA *Dum.*
  - bicuspidata *Mass.* 39
  - carnosa *Steph.*
  - lacerata *Steph.*
  - natalensis *Steph.*
  - truncatella *Nees*
- MICROLEPIDOZIA *Spruce*
  - tabularis (*Steph.*) *S. Arnell*
- PSILOCLADA *Mitt.*
  - clandestina *Mitt.*
- TELARANEA *Spruce*
  - nematodes (*Gott.* ex *Aust.*) *Howe* 40

LEPICOLEACEAE (H32)

- LEPICOLEA *Dum.*
  - ochroleuca (*Spreng.*) *Spruce*

HERBERTACEAE (H33)

- HERBERTUS *S. Gray* 41
  - capensis (*Steph.*) *Sim*

ANTHOCEROTACEAE (A1) 42

- ANTHOCEROS *L.*
  - dimorphus *Sim*
  - natalensis *Steph.*
  - sambesianus *Steph.*
- PHAEOCEROS *Prosk.*
  - bolusii (*Sim*) *S. Arnell*
  - laevis (*L.*) *Prosk.*
  - minutus (*Mitt.*) *S. Arnell*

3.2 *MUSCI*

SPHAGNACEAE (1)

- SPHAGNUM *L.* 43
  - africanum *Welw. & Duby* 43
  - balfourianum *Warnst.*
  - capense *Hornsch.* 44
  - fimbriatum *Wils.* in *Hook.*
  - laceratum *C. Muell. & Warnst.*
  - pappeanum *C. Muell.*
  - truncatum *Hornsch.*

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  - hygrometrica *Harv. & Hook.*

HEDWIGIACEAE (47)

- BRAUNIA *B.S.G.*
  - secunda (*Hook.*) *B.S.G.*

HEDWIGIA *P. Beauv.*
ciliata (*Hedw.*) *Ehrh.* ex *P. Beauv.*

HEDWIGIDIUM *B.S.G.*
integrifolium (*P. Beauv.*) *Dix.* in *C. Jens.*

RHACOCARPUS *Lindb.*
purpurascens (*Brid.*) *Par.*
rehmannianus (*C. Muell.*) *Wijk & Marg.*

CRYPHAEACEAE (48)

CRYPHAEA *Mohr in Web.*
exigua (*C. Muell.*) *Jaeg.*

FORSSTROEMIA *Lindb.*
producta (*Hornsch.*) *Par.*

LEUCODONTACEAE (49)

ANTITRICHIA *Brid.*
curtipendula (*Hedw.*) *Brid.* 215

LEUCODON *Schwaegr.*
capensis *Schimp.* in *Ren.* 216
maritimus (*Hook.*) *Wijk & Marg.*

PTEROGONIUM *Sw.*
gracile (*Hedw.*) *Sm.*

PRIONODONTACEAE (53)

PRIONODON *C. Muell.*
densus (*Hedw.*) *C. Muell.* 217

TRACHYPODACEAE (55)

TRACHYPODOPSIS *Fleisch.*
serrulata (*P. Beauv.*) *Fleisch.*

TRACHYPUS *Reinw. & Hornsch.*
bicolor *Reinw. & Hornsch.*

PTEROBRYACEAE (57) 218

CALYPTOTHECIUM *Mitt.*
acutifolium (*Brid.*) *Broth.*
hoehnelii (*C. Muell.*) *Argent*

JAEGERINA *C. Muell.*
stolonifera (*C. Muell.*) *C. Muell.* 219

ORTHOSTICHOPSIS *Broth.*
pinnatella (*Broth.*) *Broth.* 220

PTEROBRYOPSIS *Fleisch.*
rehmannii *Magill* 221

METEORIACEAE (58)

AEROBRYOPSIS *Fleisch.*
capensis (*C. Muell.*) *Fleisch.*

FLORIBUNDARIA *Fleisch.*
floribunda (*Dozy & Molk.*) *Fleisch.*

PAPILLARIA (*C. Muell.*) *C. Muell.*
africana (*C. Muell.*) *Jaeg.*

PILOTRICHELLA (*C. Muell.*) *Besch.* 222
conferta *Ren. & Card.*
cuspidata *Broth.*
panduraefolia (*C. Muell.*) *Jaeg.*

SQUAMIDIUM (*C. Muell.*) *Broth.*
biforme (*Hampe*) *Broth.*

PHYLLOGONIACEAE (59)

CATAGONIUM *C. Muell.* ex *Broth.*
mucronatum (*Jaeg.*) *Broth.* 223

NECKERACEAE (60)

LEPTODON *Mohr*
smithii (*Hedw.*) *Web. & Mohr*

NECKERA *Hedw.*
valentiniana *Besch.*

PINNATELLA *Fleisch.*
flagellacea (*Mitt.*) *Broth.*

POROTHAMNIUM *Fleisch.*
capense (*Broth. & Dix.*) *Sim* 224
hildebrandtii (*C. Muell.*) *Fleisch.* 225
natalense (*C. Muell.*) *Fleisch.*
pennaefrondeum (*C. Muell.*) *Card.* 225

LEMBOPHYLLACEAE (61)

RIGODIUM *Kunze* ex *Schwaegr.*
kilimandscharicum (*Broth.*) *Par.* 226

HOOKERIACEAE (65)

CALLICOSTELLA (*C. Muell.*) *Mitt.*
applanata *Broth. & Bryhn*
tristis (*C. Muell.*) *Broth.*

CALYPTROCHAETA *Desv.*
asplenioides (*Brid.*) *Crosby* 227

CYCLODICTYON *Mitt.*
borbonicum (*Besch.*) *Broth.* 228
vallis-gratiae (*Hampe*) *O. Kuntze*

DISTICHOPHYLLUM *Dozy & Molk.*
taylorii *Sim*

HOOKERIOPSIS (*Besch.*) *Jaeg.*
pappeana (*Hampe*) *Jaeg.*

HYPOPTERYGIUM *Brid.*
laricinum (*Hook.*) *Brid.*
polythrix *Dix.* 229

LEPIDOPILIDIUM (*C. Muell.*) *Broth.*
hanningtonii (*Mitt.*) *Broth.* 230

LESKEODON *Broth.*
mniifolium (*Hornsch.*) *Bizot* 216

LOPIDIUM *Hook. f. & Wils.*
pennaeforme (*Brid.*) *Fleisch.*

FABRONIACEAE (70)

DIMERODONTIUM *Mitt.*
africanum *C. Muell.*

FABRONIA *Raddi*
abyssinica *C. Muell.* 231

breutelii *Hampe* in *C. Muell.* 232
ecklonianа *Hampe* in *C. Muell.* 233
gueinzii *Hampe* in *C. Muell.*
leikipiae *C. Muell.* 231
perciliata *C. Muell.* 234
pilifera *Hornsch.* 231
rehmannii *C. Muell.* 231
victoriae *Dix.*
wageri *Dix.*

HELICODONTIUM *Schwaegr.*
lanceolatum (*Hampe & C. Muell.*) *Jaeg.*

HYPNOFABRONIA *Dix.*
marginata *Dix.*

ISCHYRODON *C. Muell.*
lepturus (*Tayl.*) *Schelpe* 235

LEPTOISCHYRODON *Dix.*
congoanus *Dix.* 236

LESKEACEAE (71)

LESKEELLA (*Limpr.*) *Loeske*
zuluensis *Broth. & Bryhn* 237

LINDBERGIA *Kindb.*
haplocladioides *Dix.*
patentifolia *Dix.*
pseudoleskeoides *Dix.*
viridis *Dix.*

PSEUDOLESKEA *B.S.G.*
leskeoides (*Par.*) *C. Muell.* 238

PSEUDOLESKEOPSIS *Broth.* 239
claviramea (*C. Muell.*) *Thér.*
pseudoattenuata (*C. Muell.*) *Thér.*
unilateralis *Dix.* 240

THUIDIACEAE (72)

ABIETINELLA *C. Muell.* 241
abietina (*Hedw.*) *Fleisch.*

HAPLOCLADIUM (*C. Muell.*) *C. Muell.*
angustifolium (*Hampe & C. Muell.*) *Broth.*

HAPLOHYMENIUM *Dozy & Molk.*
pseudotriste (*C. Muell.*) *Broth.*

HERPETINEURON (*C. Muell.*) *Card.*
toccoae (*Sull. & Lesq.*) *Card.*

RAUIELLA *Reim.*
subfilamentosa (*Besch.*) *Wijk & Marg.*

THUIDIUM *B.S.G.* 242
chenagonii *C. Muell.* ex *Ren. & Card.* 243
matarumense *Besch.*
ramusculosum (*Mitt.*) *Jaeg.*
varians *Welw. & Duby*
versicolor (*C. Muell.*) *Jaeg.*

AMBLYSTEGIACEAE (73)

CRATONEURON (*Sull.*) *Spruce*
filicinum (*Hedw.*) *Spruce* 244

DREPANOCLADUS (*C. Muell.*) *G. Roth.*
hallii *Broth. & Dix.*
sparsus *C. Muell.*
uncinatus (*Hedw.*) *Warnst.*

HYGROAMBLYSTEGIUM *Loeske*
caudicaulis (*C. Muell.*) *Broth.*

LEPTODICTYUM (*Schimp.*) *Warnst.*
riparium (*Hedw.*) *Warnst.* 245

PLATYHYPNIDIUM *Fleisch.*
macowanianum (*Par.*) *Fleisch.*

SCIAROMIUM (*Mitt.*) *Mitt.*
capense *Mitt.* ex *Dix.*

BRACHYTHECIACEAE (74)

BRACHYTHECIUM *B.S.G.*
implicatum (*Hornsch.*) *Jaeg.* 246
pinnatum *Dix.* 246
plumosum (*Hedw.*) *B.S.G.*
populeum (*Hedw.*) *B.S.G.* 247
pseudopopuleum (*C. Muell.*) *Schimp.* in *Jaeg.* 248
pseudovelutinum (*C. Muell.*) *Jaeg.* 248
salebrosum (*Web. & Mohr*) *B.S.G.*
subrutabulum (*C. Muell.*) *Jaeg.* 246

OXYRRHYNCHIUM (*B.S.G.*) *Warnst.*
confervoideum *Sim*
subasperum *Sim*

PALAMOCLADIUM *C. Muell.*
sericeum (*Jaeg.*) *C. Muell.*

RHYNCHOSTEGIELLA (*B.S.G.*) *Limpr.*
holstii (*Broth.*) *Broth.* 249
sublaevipes *Broth. & Bryhn* 250
zeyheri (*C. Muell.*) *Broth.*

RHYNCHOSTEGIUM *B.S.G.*
brachypterum (*Hornsch.*) *Jaeg.*
raphidorrhynchum (*C. Muell.*) *Jaeg.*
subbrachypterum *Broth. & Bryhn* 251

ENTODONTACEAE (75)

ENTODON *C. Muell.*
cymbifolius *Wag. & Dix.*
dregeanus (*Hornsch.*) *C. Muell.*
geminidens (*Besch.*) *Par.*
natalensis *Rehm.* ex *C. Muell.*

ERYTHRODONTIUM *Hampe*
julaceum (*Schwaegr.*) *Par.* 252
subjulaceum (*C. Muell.*) *Par.* 253

LEVIERELLA *C. Muell.*
fabroniacea *C. Muell.* 254

TRACHYPHYLLUM *Gepp* in *Hiern.* 255
fabronioides (*Besch.*) *Gepp*
gastrodes (*Welw. & Duby*) *Gepp*
maximum *Dix.*

PLAGIOTHECIACEAE (76)

- PLAGIOTHECIUM *B.S.G.*
  - membranosulum *C. Muell.*
  - rhynchostegioides *C. Muell.*
- STEREOPHYLLUM *Mitt.*
  - natalense *Sim*
  - odontocalyx (*C. Muell.*) *Jaeg.*
  - woodii (*Sim*) *Magill* 256

SEMATOPHYLLACEAE (77)

- HETEROPHYLLIUM (*Schimp.*) *Kindb.* in *Fleisch.*
  - flexile (*Ren. & Card.*) *Thér. & P. Vard.*
  - transvaalense (*Thér. & Dix.*) *Thér. & P. Vard.*
- MEIOTHECIUM *Mitt.*
  - fuscescens (*Jaeg.*) *Broth.* 257
- SEMATOPHYLLUM *Mitt.*
  - brachycarpum (*Hampe*) *Broth.*
  - caespitosum (*Hedw.*) *Mitt.*
  - dregei (*C. Muell.*) *Magill* 258
  - gueinzii (*Hampe*) *Magill* 258
  - sphaeropyxis (*C. Muell.*) *Broth.*
  - wageri *Wright* ex *Wag.*
  - zuluense (*Sim*) *Magill* 258
- TRICHOSTELEUM *Mitt.*
  - perchlorosum *Broth. & Bryhn* 259
- WIJKIA *Crum*
  - trichocolea (*C. Muell.*) *Crum* 260

HYPNACEAE (78)

- ECTROPOTHECIUM *Mitt.*
  - brachycarpum (*Dix.*) *Magill* 261
  - perrotii *Ren. & Card.* 262
  - regulare (*Brid.*) *Jaeg.*
- HYPNUM *Hedw.*
  - aduncoides (*Brid.*) *C. Muell.*
  - cupressiforme *Hedw.*
- ISOPTERYGIUM *Mitt.*
  - aquaticum *Dix.*
  - leucophanes (*C. Muell.*) *Jaeg.*
  - leucopsis (*C. Muell.*) *Par.*
  - punctulatum *Broth. & Wag.*
  - strangulatum (*C. Muell.*) *Broth.*
  - taxithelioides *Broth. & Bryhn*
  - taylorii *Sim*
- MITTENOTHAMNIUM *Henn.*
  - cavifolium (*Dix.*) *Wijk & Marg.*
  - ctenidioides (*Dix.*) *Schelpe*
  - cygnicollum (*Dix.*) *Wijk & Marg.*
  - diminutivum (*Hampe*) *Britt.*
  - horridulum (*Broth.*) *Card.*
  - patens (*Hampe*) *Card.*
  - pseudoreptans (*C. Muell.*) *Card.*
- VESICULARIA (*C. Muell.*) *C. Muell.*
  - galerulata (*Dub.*) *Broth.*

HYLOCOMIACEAE (80)

- LEPTOHYMENIUM *Schwaegr.* 263
  - breutelii (*C. Muell.*) *Schimp.*
  - dentatum *Schwaegr.*

POLYTRICHACEAE (83)

- ATRICHUM *P. Beauv.*
  - androgynum (*C. Muell.*) *Jaeg.*
- POGONATUM *P. Beauv.*
  - capense (*Hampe*) *Jaeg.*
  - nanum (*Hedw.*) *P. Beauv.*
  - oligodus (*C. Muell.*) *Mitt.*
- POLYTRICHUM *Hedw.*
  - commune *Hedw.*
  - formosum *Hedw.* 264
  - juniperinum *Willd.* ex *Hedw.* 265
  - longisetum *Sw.* ex *Brid.* 266
  - natalense *Sim*
  - piliferum *Schreb.* ex *Hedw.*
  - subformosum *Besch.* 267
- PSILOPILUM *Brid.*
  - afrolaevigatum *Dix.*
  - trichodon (*Hook. f. & Wils.*) *Mitt.*
  - wageri *Broth.* in *Dix.*

4. SYNONOMY AND EXCLUDED SPECIES

This list contains new and selected synonomy, important to the use of the checklist, and species excluded from the flora. For additional synonomy, Schelpe (1978) and Wijk *et al.* (1959–1969) should be consulted. Two groups are listed, *Hepaticae* and *Musci*. The synonyms (*in italics*) are listed alphabetically for each group. New synonomy is indicated by an asterisk (*).

4.1 *HEPATICAE*

Adelanthus sphalerus (Hook. & Tayl.) Mitt.
= A. lindenbergianus (*Lehm.*) *Mitt.*

Adelanthus unciformis (Tayl.) Mitt.
= A. lindenbergianus (*Lehm.*) *Mitt.*

Bazzania convexa (Thunb.) Mitt.
= B. nitida (*Weber*) *Grolle*

Bazzania pulvinata (Steph.) S. Arnell
= B. decrescens (*Lehm. & Lindb.*) *Trev.*

Ciliolejeunea capensis S. Arnell
= Lejeunea arnelliana *Schust.*

Dicranolejeunea atra (Mitt.) Vand. Bergh.
= D. chrysophylla (*Lehm.*) *Grolle*

Dicranolejeunea natalensis (Sim) S. Arnell
= D. madagascariensis (*Gott.*) *Steph.*

Frullania borgenii Pears.
= F. obscurifolia *Mitt.*

Frullania bursicula Steph.
= F. socotrana *Mitt.*

Frullania ecklonii (Spreng.) Gott. & Lindenb.
= F. arecae (*Spreng.*) *Gott.*

Frullania garsidei S. Arnell
= F. variegata *Steph.*

Frullania natalensis Sim
= F. depressa *Mitt.*

Frullania rehmannii Steph.
= F. capensis *Gott.*

Frullania squarrosa (Reinw., Bl. & Nees) Dum.
= F. ericoides (Nees) Mont.

Leucolejeunea capensis S. Arnell
= L. xanthocarpa (*Lehm. & Lindenb.*) *Evans*

Metzgeria hamata Lindb.
= M. leptoneura *Spruce*

Pallavicinia pilifera Steph.
= P. lyellii (*Hook.*) *S. Gray*

Plagiochasma algericum Steph.
= P. rupestre (*Forst.*) *Steph.*

Plagiochasma dinteri Steph.
= P. microcephalum (*Steph.*) *Steph.*

Plagiochasma dschallanum Steph.
= P. rupestre (*Forst.*) *Steph.*

Plagiochasma fisherianum Steph.
= P. appendiculatum *Lehm. & Lindenb.*

Plagiochasma tenue Steph.
= P. rupestre (*Forst.*) *Steph.*

Plagiochila corymbulosa Pears.
= P. heterostipa *Steph.*

Plagiochila henriquesi Steph.
= P. divergens *Steph.*

Plagiochila lunata S. Arnell
= P. squamulosa *Mitt.*

Plagiochila natalensis Pears.
= P. heterostipa *Steph.*

Ptychanthus dioicus (Sim) S. Arnell
= P. striatus (*Lehm. & Lindenb.*) *Nees*

Schistochila limbata S. Arnell
= S. sphagnoides (*Schwaegr.*) *Steph.*

Simia atroviridis (Sim) S. Arnell
≡ Cephaloziella atroviridis (*Sim*) *S. Arnell*

Sphenolobus minutus (Schreb.) Berggr.
≡ Anastrophyllum minutum (*Schreb.*) *Schust.*

Telaranea sejuncta (Aongstr.) S. Arnell
= T. nematodes (*Gott.* ex *Aust.*) *Howe*

4.2 *MUSCI*

Acanthocladiella transvaaliensis Thér. & Dix.
≡ Heterophyllium transvaaliense (*Thér. & Dix.*) *Thér. & P. Vard.*

Acanthocladium trichocolea (C. Muell.) Broth.
≡ Wijkia trichocolea (*C. Muell.*) *Crum*

Amblystegium afrofluitans (C. Muell.) Sim
= Leptodictyum riparium (*Hedw.*) *Warnst.*

Amphidium cyathicarpum (Mont.) Broth.
= A. tortuosum (*Hornsch.*) *Robins.*

Aongstroemia gymnomitrioides Dix
≡ Cladophascum gymnomitrioides (*Dix.*) *Dix.*

Aongstroemia vulcanica (Brid.) C. Muell.
= A. filiformis (*P. Beauv.*) *Wijk & Marg.*

Archidium alterifolium (Hedw.) Mitt.
— Excluded

Archidium ecklonii C. Muell.
≡ Pleuridium ecklonii (*C. Muell.*) *Snider*

Barbula anoectangiacea C. Muell.
?= Ceratodon sp.

**Barbula elongata* Dix.
≡ Barbula zambesiaca *Magill* 119

Barbula torquatifolia Geh.
≡ Tortula torquatifolia (*Geh.*) *Hilp.*

Barbula trichostomacea C. Muell.
= Trichostomopsis australasiae (*Hook. & Grev.*) *Robins.*

Barbula trivialis C. Muell.
≡ Trichostomopsis trivialis (*C. Muell.*) *Robins.*

**Barbula xanthocarpa* C. Muell.
≡ Didymodon xanthocarpus (*C. Muell.*) *Magill* 124

Bartramia sericea Hornsch.
= B. capensis (*R. Br.*) *Wijk & Marg.*

Brachymenium borgenianum Hampe
= B. acuminatum *Harv.* in *Hook.*

Brachymenium campylotrichum (C. Muell.) Broth.
= B. angolense (*Welw. & Duby*) *Jaeg.*

Brachymenium lonchopus P. Vard.
= B. acuminatum *Harv.* in *Hook.*

Brachymenium rhodesiae Dix.
= B. rigidum *Broth. & Par.*

Brachymenium variabile Dix.
= B. leptophyllum (*C. Muell.*) *Jaeg.*

Brachythecium afroalbicans Dix.
= Ischyrodon lepturus (*Tayl.*) *Schelpe*

Brachythecium stictopatens C. Muell.
= B. populeum (*Hedw.*) *B.S.G.* 247

**Braunia peristomata* Dix.
= Leucodon maritimus (*Hook.*) *Wijk & Marg.* 268

**Breutelia aristaria* (C. Muell.) Broth.
= Bartramia capensis (*R. Br.*) *Wijk & Marg.*

Breutelia breutelii (C. Muell.) Broth.
?= B. afroscoparia (*C. Muell.*) Par.

Breutelia subgnaphalea (C. Muell.) Par.
= B. diffracta *Mitt.*

Bruchia elegans (Hornsch.) C. Muell.
= B. brevipes *Harv.* ex *Hook.*

**Bruchia rehmannii* C. Muell.
= Pleuridium pappeanum (*C. Muell.*) *Jaeg.*

Bryum acuminatum Sim
≡ B. simii *Schelpe*

Bryum aterrimum C. Muell. *ex* Sim
= B. capillare *Hedw.*

Bryum aulacomnioides C. Muell.
= B. pseudotriquetrum (*Hedw.*) *G.M.S.*

Bryum canariensiforme Dix.
= B. canariense *Brid.*

Bryum condensatum Hampe *in* C. Muell.
?= B. canariense *Brid.*

Bryum decaryanum Thér.
= B. capillare *Hedw.*

Bryum herpetineuron Thér.
= B. perlimbatum *Card.*

Bryum pappeanum C. Muell.
= B. capillare *Hedw.*

Bryum polytrichoideum C. Muell.
= B. capillare *Hedw.*

Bryum pseudotriquetriforme Card.
= B. pseudotriquetrum (*Hedw.*) *G.M.S.*

Bryum pumiliroseum Dix.
= B. billardieri *Schwaegr.*

Bryum rigidicuspis Dix.
= B. bicolor *Dicks.*

Bryum stellipilum C. Muell.
?= B. argenteum *Hedw.*

Bryum subcavifolium Dix.
?= B. radiculosum *Brid.*

Bryum tenellicaule Card.
= B. bicolor *Dicks.*

Bryum zuluense Broth. & Bryhn
= B. microerythrocarpum *C. Muell. & Kindb.*

Calyptothecium subacutifolium Broth.
= C. acutifolium (*Brid.*) *Broth.*

Campylopus echinatus Sim
= C. introflexus (*Hedw.*) *Brid.*

**Campylopus edwardsii* Sim
= C. olivaceonigricans (*C. Muell.*) *par.* 90

Campylopus flexuosus (Hedw.) Brid.
— ? Excluded

Campylopus lepidophyllus (C. Muell.) Jaeg.
= C. introflexus (*Hedw.*) *Brid.*

Campylopus nanus C. Muell.
≡ Microcampylopus nanus (*C. Muell.*) *Broth.*

Campylopus perpusillus Mitt.
≡ Microcampylopus perpusillus (*Mitt.*) *Broth.*

Campylopus polytrichoides De Not.
= C. pilifera *Brid.*

Campylopus pseudojulaceus Sim
≡ C. simii *Schelpe*

Cyclodictyon laetevirens (Hook. & Tayl.) Mitt.
— Excluded 269

Dicranella minuta (Hampe) Jaeg.
≡ Microdus minutus (*Hampe*) *Besch.*

Dicranella subcompressa (Hampe) Jaeg.
≡ Aongstroemia subcompressa *Hampe*

Dicranella symonsii Dix.
≡ Anisothecium symonsii (*Dix.*) *Broth.*

**Didymodon knysnea* Rehm. *ex* Sim
= D. xanthocarpus (*C. Muell.*) *Magill*

Distichophyllum mniifolium (Hornsch.) Sim
≡ Leskeodon mniifolium (*Hornsch.*) *Bizot*

Ditrichum flexifolium (Hook.) Hampe
= D. difficile (*Duby*) *Fleisch.*

**Ectropothecium brevisetum* Dix.
= E. brachycarpum (*Dix.*) *Magill* 261

**Entodon brevirameus* Dix.
= E. dregeanus (*Hornsch.*) *C. Muell.* 270

Entosthodon ampliretis Rehm. *ex* C. Muell.
≡ Funaria ampliretis (*C. Muell.*) *Broth.*

Entosthodon bergianus (Hornsch.) C. Muell.
≡ Funaria bergiana (*Hornsch.*) *Broth.*

**Entosthodon cavifolius* Mitt. *in* Harv.
≡ Funaria harveyana *Magill* 159

Entosthodon dixonii Sim
≡ Funaria longicollis *Dix.*

Entosthodon micropyxis C. Muell.
≡ Funaria micropyxis (*C. Muell.*) *Broth.*

Entosthodon rottleri (Schwaegr.) C. Muell.
≡ Funaria rottleri (*Schwaegr.*) *Broth.*

**Entosthodon urceolatus* Mitt. *in* Harv.
≡ Funaria urceolatus (*Mitt.*) *Magill* 163

Eriopus mniaceus (C. Muell.) Broth.
= Calyptrochaeta asplenioides (*Brid.*) *Crosby*

Erpodium hanningtoni Mitt.
= E. beccarii *C. Muell.* in *Vent.*

Erythrodontium rotundifolium (C. Muell.) Par.
— Excluded 253

Fabronia pusilla Raddi
— Excluded

**Fissidens amblyophyllus* C. Muell
=F. asplenioides *Hedw.*

Fissidens aristatus Sim
≡ F. simii *Schelpe*

Fissidens bifrons Schimp. *ex* C. Muell.
?= F. splachnifolius *Hornsch.*

Fissidens brevisetus Sim
≡ F. scleromitrius (*Besch.*) *Broth.*

**Fissidens cymatophyllus* C. Muell.
= F. glaucescens *Hornsch.*

**Fissidens eschowensis* Broth. & Bryhn
= F. submarginata *Bruch* in *Krauss*

Fissidens lanceolatus Hampe
= F. glaucescens *Hornsch.*

Fissidens minutulus Sull.
— Excluded

**Fissidens procerior* Broth. & Bryhn
= F. glaucescens *Hornsch.* 55

**Fissidens rotundatus* Dix.
= F. borgenii *Hampe*

**Fissidens urceolatus* Wag. & Dix.
= F. papillifolius *Dix.*

Funaria marginata (C. Muell.) Broth.
= F. ampliretis (*C. Muell.*) *Broth.*

Grimmia campestris (Hedw.) Sm.
= G. pulvinata (*Hedw.*) *Sm.*

Grimmia commutata Hueb.
= G. ovalis (*Hedw.*) *Lindb.*

**Grimmia drakensbergensis* Sim
= G. pulvinata (*Hedw.*) *Sm.*

**Grimmia senilis* Sim
= G. laevigata (*Brid.*) *Brid.*

**Gymnostomum bewsii* Sim *ex* Dix.
= Anoectangium wilmsianum (*C. Muell.*) *Par.* 116

Gymnostomum calcareum Nees & Hornsch.
= G. aeruginosum *Sm.* 125

**Gymnostomum dimorphum* (C. Muell.) Sim
≡ Didymodon dimorphus (*C. Muell.*) *Broth.*

**Gymnostomum ligulatum* Rehm *ex* Sim
≡ Didymodon ligulatus (*Sim*) *Magill* 122

**Gymnostomum pottsii* (Dix.) Sim
= Didymodon dimorphus (*C. Muell.*) *Broth.*

**Gyroweisia amplexicaulis* Sim
= Husnotiella latifolia (*Dix.*) *Zander & Magill* 127

**Gyroweisia latifolia* Dix.
≡ Husnotiella latifolia (*Dix.*) *Zander & Magill* 127

Heterophyllium alboalare (Broth.) Broth.
— Excluded

Hygroamblystegium filicinum (Hedw.) Loesk.
≡Cratoneuron filicinum (*Hedw.*) *Spruce*

Hygroamblystegium fluviatile (Hedw.) Loesk.
— Excluded 244

Hymenostomum socotranum (Mitt.) Broth.
— Excluded

**Hyophila cyathiformis* (Dix.) Sim
= Hypodontium dregei (*Hornsch.*) *C. Muell.* 271

**Hyophila erosa* Sim
≡ Oreoweisia erosa (*C. Muell.*) *Kindb.*

Hypopterygium lutescens Hornsch.
?= Porothamnium sp.

Hypopterygium pennaeforme (Brid.) Hornsch.
≡ Lopidium pennaeforme (*Brid.*) *Fleisch.*

Ischyrodon seriolus (C. Muell.) C. Muell.
= I. lepturus (*Tayl.*) *Schelpe*

**Isopterygium brachycarpum* Dix.
≡ Ectropothecium brachycarpum (*Dix.*) *Magill* 261

**Isopterygium subleucopsis* Broth. & Bryhn
= I. leucophanes (*C. Muell.*) *Jaeg.*

Leptodontium squarrosum (Hook.) Par.
= L. viticulosoides (*P. Beauv.*) *Wijk & Marg.*

**Leucobryum perfalcatum* Sim
= L. rehmannii *C. Muell.* 103

Leucodon assimilis (C. Muell.) Jaeg.
= L. maritimus (*Hook.*) *Wijk & Marg.*

Leucoloma zuluense Broth. & Bryhn
= L. chrysobasilare (*C. Muell.*) *Jaeg.*

Macromitrium confusum Mitt.
?= Macrocoma lycopodioides (*Schwaegr.*) *Vitt.* 205

Macromitrium dregei Hornsch.
= M. tenue *var.* dregei (*Hornsch.*) *C. Muell.*

Microthamnium cavifolium Dix.
≡ Mittenothamnium cavifolium (*Dix.*) *Wijk & Marg.*

Microthamnium ctenidioides Dix.
≡ Mittenothamnium ctenidioides (*Dix.*) *Schelpe*

Microthamnium cygnicollum Dix.
≡ Mittenothamnium cygnicollum (*Dix.*) *Wijk & Marg.*

Microthamnium horridulum Broth.
≡ Mittenothamnium horridulum (*Broth.*) *Card*

Microthamnium patens (Hampe) Jaeg.
≡ Mittenothamnium patens (*Hampe*) *Card.*

Microthamnium pseudoreptans (C. Muell.) Jaeg.
≡ Mittenothamnium pseudoreptans (*C. Muell.*) *Card.*

Mielichhoferia eckloni Hornsch.
= M. bryoides (*Harv.*) *Wijk & Marg.*

Mnium rostratum Schrad.
≡ Plagiomnium rostratum (*Schrad.*) *T. Kop.*

Moenkemeyera scleromitria Besch.
≡ F. scleromitria (*Besch.*) *Broth.*

Neckera remota Bruch & Schimp. ex C. Muell.
— Excluded

Neckeropsis lepineana (Mont.) Fleisch.
— Excluded 272

Orthostichopsis subimbricata (Hampe) Broth.
— Excluded 273

Orthotrichum glaucum Spreng.
= O. diaphanum *Brid.*

Orthotrichum macleaii Sim
= O. rupestre *Schwaegr.*

Orthotrichum piliferum Sim
= O. diaphanum *Brid.*

Orthotrichum pseudotenellum Hampe *ex* C. Muell.
= O. diaphanum *Brid.*

**Papillaria natalensis* Sim
= Trachypus bicolor *Reinw. & Hornsch.* 274

Philonotis imbricatula Mitt.
= P. hastata (*Duby*) *Wijk & Marg.*

Philonotis laxissima (C. Muell.) Mitt.
= P. hastata (*Duby*) *Wijk & Marg.*

Philonotis mauritiana Aongstr.
— Excluded

Philonotis transvaaloalpina (C. Muell.) Broth.
?= Bryum alpinum *Huds.* ex *With.*

**Plagiothecium hendersonii* Dix.
= Entodon dregeanus (*Hornsch.*) *C. Muell.* 275

Pleuropus sericeus (Jaeg.) Broth.
≡ Palamocladium sericeum (*Jaeg.*) *C. Muell.*

Pogonatum simense (Bruch & Schimp.) Jaeg.
= P. oligodus (*C. Muell.*) *Mitt.*

Porothamnium comorense (C. Muell.) Sim
— Excluded

**Porothamnium woodii* Sim
≡ Stereophyllum woodii (*Sim*) *Magill* 256

**Prionodon rehmannii* Mitt.
= P. densus (*Hedw.*) *C. Muell.* 217

Pseudoleskea claviramea (C. Muell.) C. Muell.
≡ Pseudoleskeopsis claviramea (*C. Muell.*) *Thér.*

Pseudoleskea macowaniana C. Muell.
=Pseudoleskea leskeoides (*Par.*) *C. Muell. var.* macowaniana (*C. Muell.*) *Thér.*

Ptychomitrium mucronatum (C. Muell.) Schimp. *ex* Par.
= Trichostomum sp.

Racomitrium austropatens C. Muell.
=Grimmia apocarpa *Hedw.*

**Racomitrium drakensbergense* Sim
=R. crispulum (*Hook. f. & Wils.*)

Racomitrium hypnoides (Hedw.) Lindb.
= R. lanuginosum (*Hedw.*) *Brid.*

Racopilum africanum Mitt.
— Excluded

Racopilum tomentosum (Hedw.) Brid.
— Excluded

Rauia abbreviata (Broth.) Broth.
≡ Rauiella subfilamentosa (*Besch.*) *Wijk & Marg.*

Renauldia hoehnelii (C. Muell.) Broth.
≡ Calyptothecium hoehnelii (*C. Muell.*) *Argent*

Rhacocarpus ecklonianus (C. Muell.) Broth.
= R. purpurascens (*Brid.*) *Par.*

**Rhaphidorrhynchium dregei* (C. Muell.) Broth.
≡ Sematophyllum dregei (*C. Muell.*) *Magill* 258

**Rhaphidorrhynchium gueinzii* (Hampe) Broth.
≡ Sematophyllum gueinzii (*Hampe*) *Magill* 258

**Rhaphidorrhynchium zuluense* Sim
≡ Sematophyllum zuluense (*Sim*) *Magill* 258

Rhynchostegiella tenella (Dicks.) Limpr.
— Excluded 276

Schlotheinia subventrosa Broth. & Bryhn
= S. ventrosa *C. Muell.* 210

Schwetschkea rehmannii C. Muell.
= Helicodontium lanceolatum (*Hampe & C. Muell.*) *Jaeg.*

**Semibarbula elongata* Hilp.
≡ Barbula zambesiaca *Magill* 119

Semibarbula orientalis (Web.) Wijk & Marg.
= Barbula indica (*Hook.*) *Spreng.*

Semibarbula stuhlmannii (Broth.) Hilp.
— Excluded 277

Sphagnum bordasii Besch.
= S. truncatum *Hornsch.*

Sphagnum marlothii Warnst.
?= S. balfourianum *Warnst.*

Sphagnum panduraefolium C. Muell.
?= S. capense *Hornsch.*

Sphagnum pycnocladulum C. Muell.
?= S. capense *Hornsch.*

Sphagnum rehmannii Warnst.
= S. truncatum *Hornsch.*

Squamidium rehmannii (C. Muell.) Broth.
= S. biforme (*Hampe*) *Broth.*

**Stereophyllum zuluense* Broth. & Bryhn
= S. odontocalyx (*C. Muell.*) *Jaeg.*

Syrrhopodon recurvifolius Hornsch.
?= Macromitrium sp.

Tetrapterum capense Jaeg.
= T. tetragonum (*Hook.*) *Andrews*

Thuidium borbonicum Besch.
?= T. versicolor (*C. Muell.*) *Jaeg.*

Thuidium laevipes Mitt.
?= T. varians *Welw. & Duby*

Thuidium promontorii (C. Muell.) Par.
= T. matarumense *Besch.*

Thuidium sublaevipes Dix.
= T. ramusculosum (*Mitt.*) *Jaeg.*

Thuidium tamariscinum (Hedw.) B.S.G.
— Excluded

Thuidium thamniopsis Rehm. *ex* Sim
= Rigodium kilimandscharicum (*Broth.*) *Par.*

Thuidium torrentium C. Muell.
?= T. versicolor (*C. Muell.*) *Jaeg.*

Tortella eutrichostoma (C. Muell.) Broth.
= T. humilis (*Hedw.*) *Jenn.*

Tortella inclinata (Hedw.) Limpr.
— Excluded 278

**Tortella obtusifolia* Dix.
≡ Barbula umtaliensis *Magill* 118

**Tortella opaca* Dix.
≡ Weissia opaca (*Dix.*) *Magill* 149

**Tortella petrieana* Sim
= T. humilis (*Hedw.*) *Jenn.*

Tortula atrovirens (Sm.) Lindb.
= Desmatodon convolutus (*Brid.*) *Grout*

**Tortula deserta* (C. Muell.) Broth.
= Desmatodon convolutus (*Brid.*) *Grout*

**Tortula irregularis* Sim
= T. hildebrandtii (*C. Muell.*) *Broth.*

**Tortula reticularia* (C. Muell.) Broth.
= T. papillosa *Wils.*

**Trichostomum rehmannii* Sim
= T. tortuloides *Sull. & Lesq.*

Webera depauperata Sim
≡ Pohlia depauperata (*Sim*) *Schelpe*

Webera macleai Rehm. *ex* Sim
≡ Pohlia macleai (*Sim*) *Schelpe*

Webera revoluta Sim
≡ Pohlia simii *Schelpe*

Weissia fallax Sehlm.
— Excluded

5. ANNOTATIONS

The annotations are listed numerically, although two groups, *Hepaticae* and *Musci*, are designated. The number refers to a reference number following individual taxa in the checklist.

5.1 *HEPATICAE*

1. *Vide* Stotler & Crandall-Stotler (1977) on the use of AYTONIACEAE instead of *Rebouliaceae*; *"Grimaldiaceae"* in Arnell (1963).
2. The treatment of **Plagiochasma** follows Bischler (1978).
3. Rhodesia only; *vide* Bischler (1978).
4. Recently reported from Windhoek, South West Africa; *vide* Bischler (1978).
5. Several species of **Riccia** occurring in the Southern African Flora were treated by Jovet-Ast (1964, 1966).
6. *Vide* Stotler & Crandall-Stotler (1977) on the use of CODONIACEAE instead of *Fossombroniaceae.*
7. *Vide* Grolle (1972); "*Riccardiaceae*" in Arnell (1963).
8. *Vide* Engel (1976); the distribution of this widespread Southern Hemisphere species is illustrated.
9. *Vide* Grolle (1972); "*Dilaenaceae*" in Arnell (1963).
10. *Vide* Bizot & Pócs (1974).
11. The treatment of **Radula** follows Jones (1977).
12. *Vide* Bizot & Pócs (1974).
13. *Vide* Stotler & Crandall-Stotler (1977) on the use of JUBULACEAE instead of *Frullaniaceae.*
14. The treatment of **Frullania** follows Vanden Berghen (1976).
15. *Vide* Bizot & Pócs (1974).
16. The treatment of **Dicranolejeunea** follows Jones (1970).
17. *Vide* Bizot & Pócs (1974).
18. Jones (1968) treated this species under **Lejeunea flava** *spp.* **tabularis** *S. Arnell*; for differences *vide* Arnell (1963).
19. *Vide* Bizot & Pócs (1974).
20. *Vide* Bizot & Pócs (1974); *vide* Jones (1970) on the use of **M. moelleriana** instead of *M. madagassa* Steph.
21. Bizot & Pócs (1974) treated these species under **Ptychocoleus** Trev.
22. The treatment of JUNGERMANNIACEAE follows Schuster (1970). Arnell (1963) treated **Acrobolbus** Nees, **Anastrophyllum** (Spruce) Steph, **Chandonanthus** Mitt., **Isotachis** Mitt., **Lophozia** (Dum.) Dum., **Marsupidium** Mitt. and *Sphenolobus* Steph. (cf. **Anastrophyllum)** in a separate family, *LOPHOZIACEAE.* Although several of these genera have been treated in small families (cf. *ISOTACHACEAE, MARSUPIDIACEAE*), because of Schuster's (1970) arguments against minor segregate families, all except the Acrobolbaceous genera have been treated under JUNGERMANNIACEAE.
23. Arnell (1963) treated this species under *Sphenolobus* Steph.; *vide* Grolle (1963) for the nomenclature of **A. minutum.**
24. *Vide* Engel (*in sched.*; PRE, F).
25. *Vide* Grolle (1972); "*Lethocoleaceae*" in Arnell (1963).
26. Treated by Arnell (1963) as *Marsupellaceae*; *vide* Grolle (1972A), Stotler & Crandall-Stotler (1977).
27. The treatment of **Plagiochila** follows Jones (1962), except where noted.
28. Jones (1962) treated **P. capensis** as **P. divergens** *var.* **capensis** (Steph.) E. W. Jones; *vide* Arnell (1963).
29. Cf. Jones (1962) on the relationship of this species to **P. sarmentosa.**
30. *Vide* Jones (1962) on the generic placement of this taxon.
31. *Vide* Jones (1962) on the relationship of this species to **G. ericetorum** (Raddi) Nees.
32. *Vide* Grolle (1972 A,B) on the use of ADELANTHACEAE instead of *Odontoschismataceae; vide* Stotler & Crandall-Stotler (1977).
33. *Vide* Grolle (1969) for distribution; also Bizot & Pócs (1974).
34. *Simia* S. Arnell (1962), *nom. illeg.*, in addition to being congeneric with **Cephaloziella,** *fide* Jones (1976), was not validly published under Art. 41 (ICBN, 1972).
35. *Vide* Engel (*in sched.*, PRE, F).
36. The treatment of **Bazzania** follows Jones (1975), except where noted.
37. Jones (1975) regards this species as a subspecies of **B. decrescens.**
38. *Vide* Stotler & Crandall-Stotler (1977) on the use of **Kurzia** instead of *Microlepidozia.*
39. The genus *Hyalolepidozia* S. Arnell (1962). *nom. illeg.*, was not validly published under Art, 41 (ICBN, 1972); **Lepidozia bicuspidata** Mass. is provisionally retained.
40. *Fide* Bizot, Dury & Pócs (1976).
41. *Vide* Florschutz & Grolle (1975) and Stotler & Crandall-Stotler (1977) on the proper spelling of **Herbertus.**
42. The treatment of **Anthoceros** and **Phaeoceros** follows Proskauer (1951, 1958).

5.2. *MUSCI*

43. The South African species of **Sphagnum** were revised by Garside (1949). The paper is well illustrated and gives important distributional and ecological information. The addition of **S. africanum** (*vide* Touw *in Sched.*; Voucher: *Vorster* 433, 509, PRE !) is based on recent collections from Mariepskop in the eastern Transvaal.
44. Garside (1949) includes *S. pycnocladulum* and *S. panduraefolium* in the synonomy of **S. capense.** He includes a good account of the intergradation that occurs among these three species, but introduces some confusion by also treating both species in his text.

45. *Vide* Schelpe (1975) for an account of the distribution in southern Africa; not treated by Sim (1926).

46. *Vide* Dixon & Wager (1929); Type: Port St. John's, Natal, *Wager* 927; not treated by Sim (1926).

47. **Fissidens androgynus Complex.** Four species are provisionally maintained in a species complex; as material presently available indicates a high degree of intergradation or variability. The species are **F. androgynus, F. latifolius, F. malacobryoides** and **F. rufescens.**

48. *Vide* P. Varde (1954); Type: Orange Kloof, Cape, *Arnell* 2180; not treated by Sim (1926).

49. Dixon & Gepp (1923) reduced *F. amblyophyllus* to the synonomy of **F. glaucescens.** Examination of type material (*Rehmann* 285, isosyntype, PRE !) indicates that *F. amblyophyllus* is conspecific with **F. asplenioides;** vide Sim (p. 203, 1926). **Fissidens glaucescens Complex**—55.

50. The southern African material has been referred to **F. borgenii** *var.* **obtusifolius;** *vide* Dixon (1920).

51. Specimens of **F. breutelii** have not been seen; Dixon in Sim (1926) compares it to **F. submarginatus.**

52. Described from Rhodesia (Sim & Dixon, 1922); although very closely related to **F. glaucescens,** the shorter, rugose leaf and obtuse apex clearly define this species. **Fissidens glaucescens Complex**—55.

53. Specimens of **F. curvatus** have not been seen; *vide* Sim (p. 188, 1926); also **F. pycnophyllus** —68.

54. Rhodesia Only; the Transvaal specimens reported by Sim (p. 201, 1926) were misidentified.

55. **Fissidens glaucescens Complex. F. glaucescens** tends to be quite variable in size, shape and ornamentation. **Fissidens asplenioides F. corrugatulus** and **F. zuluensis** are each closely related to **F. glaucescens,** but are maintained, on perhaps clinal characters, in this complex. *Fissidens procerior* Broth. & Bryhn (Holotype, H-BR !) is conspecific with **F. glaucescens,** not *F. amblyphyllus* as suggested by Sim (1926).

56. Specimens of **F. gueinzii** have not been seen. Sim (p. 198, 1926) suggests its relationship to species of the **Fissidens androgynus Complex** —47.

57. Examination of **F. haakonii** (Holotype, H-BR !) indicates that the leaf cells are minutely pleuropapillose. This character was not described by Brotherus (Bryhn, 1911) or Sim (1926).

58. *Vide* P. Varde (1932), Syntypes: Pietermaritzburg, Natal, *Hoeg* 423, 430, 432; not treated by Sim (1926).

59. Although Sim & Dixon (1922) call this a xerophyte, the plants are larger than **F. androgynus.** They also discussed the ending of the vaginant lamina on the leaf blade. This character is not unusual in Southern African **Fissidens;** in fact, it is more common than either marginal or costal termination. **Fissidens androgynus Complex**—47.

60. The single specimen referred by Sim (1926) to **F. laxifolius** is identical with **F. wageri.** The relationship between these two species is not yet settled.

61. Specimens of **F. longulus** have not been seen, Type: Boschberg, Cape, *MacOwan* s.n.; *vide* Sim (p. 189, 1926).

62. Specimens of **F. marginatus** have not been seen, Type: Table Mountain, Cape, *Ecklon* s.n., *Breutel* s.n.; *vide* Sim (p. 193, 1926).

63. *Vide* Dixon (1932), Type: Signal Hill, Cape, *Moss & Moss* 9261; not treated by Sim (1926).

64. Specimens of **F. nitens** have not been seen, Type: Inanda, Natal, *Rehmann* 289; *vide* Salmon (1899); Sim (p. 192, 1926).

65. Dixon in Sim (p. 193, 1926) raises doubt as to the origin of Mitten's specimen. Additional material has not been seen from South Africa.

66. **Fissidens parvilimbatus Complex.** Examination of type specimens and recent collections suggests that **F. parvilimbatus** is quite variable and that this variation would include **F. pectinidens** and **F. perpaucifolius.** At present, however, too little material is available to reduce these species to synonomy and they are provisionally maintained in the **Fissidens parvilimbatus Complex.**

67. *Vide* Dixon & Wager (1929), Type: Port St. John's, Natal, *Wager* 936; not treated by Sim (1926).

68. Sim (p. 187, 1926) suggests that this is closely related to **F. curvatus,** although he notes a few differences in the descriptions. This was taken up by Wijk *et al.* (1959–1969) and **F. pycnophyllus** was placed into the synonomy of **F. curvatus.** Recent collections referable to **F. pycnophyllus** have required its provisional inclusion here; however, the relationship between the two species must still be investigated; *vide* Dixon (1932).

69. Paris (1900) provided **F. rutenbergii,** *nom. nov.*, for *F. pauperrimus* C. Mueller, *hom. illeg.* (1899); Type: Rustenburg, 1877, *s.l.*; not treated by Sim (1926).

70. *Vide* p. 5.

71. The only specimen at PRE, tentatively placed here by Dixon (*in sched.*, *Hoeg* 432, PRE !), was regarded by P. Varde (1932) as a syntype of **F. hoegii.** The type of **F. subremotifolius** (Transvaal, *Wilms* s.n.) *vide* Mueller (1899) has not been seen.

72. Described by Brotherus (1894) from Tanzania; several recent collections from the Transvaal (*vide* Touw *in Sched.*; Vouchers: *Crosby & Crosby* 7801; *Vorster* 1569) have been placed here; not treated by Sim (1926).

73. New to Africa. Recent collections by the authors indicate that this species is widespread in arid parts of the western Cape Province; *vide* Schelpe (1979) and discussion by Scott & Stone (1977).

74. This treatment of **Archidium** follows the generic revision by Snider (1975).

75. The status of **C. stenocarpus** has been questioned, however, following Gangulee (1971), two distinct taxa are present in the southern African flora. Examination of recent collections and herbarium material shows that **C. stenocarpus** is more common and widespread in southern Africa than **C. purpureus.**

76. Sim (1926) placed doubt on the early record of this species in South Africa. Additional material has been collected and specimens are recently present in South African Herbaria (PRE, BOL).

77. *Vide* Dixon & Wager (1929), Type: Benoni, Transvaal, *Wager* 1005, isotype, PRE !; not treated by Sim (1926).

78. *Vide* Stone & Schelpe (1973); examination of the specimen (*Stone* s.n., BOL) indicates that it is very similar to **E. exiguum,** if not identical; *vide* Scott & Stone (1977) for illustration.

79. *Vide* Sim (p. 143, 1926), apparently very near **P. pappeanum.**

80. Treated by Sim (1926) under **Archidium;** *fide* Snider (1975); lectotype: *Naumann*, 1858, BM.

81. Although **P. nervosum** and **P. pappeanum** have several characters in common, we cannot agree with Sim (p. 143, 1926) that **P. pappeanum** represents a forest form of **P. nervosum.** Recent collections have been made of both species under similar arid conditions.

82. *Vide* P. Varde (1955), Syntypes: Drakensberg, Natal, *Cholnoky* 67, 8; not treated by Sim (1926).

83. *Vide* Mueller (1849), Type: *Prom. Bon. Spei*, *Ecklon* s.n.; specimens not seen.

84. Sim (1926) discussed this species under *C· pseudojulaceus* Sim, *hom. illeg.* (*cf.* Schelpe 1979)· The type of **C. bryhnii** has not been located.

85. *Vide* Dixon in Luisier (1939); Type: Tristan D'acunha, *Milne*, Mitten *in sched.*, BM; not treated by Sim (1926).

86. *Vide* Scott & Stone (1977) for relationship to **C. introflexus.**

87. *Vide* Thériot (1936), Type: Sanatorium, Transvaal, *Junod* s.n., January 1900; not treated by Sim (1926).

88. Two recent indepth studies, Frahm (1974) and Gradstein & Sipman (1978) have clearly defined **C. introflexus** and outlined its relationship to **C. pilifera.** In southern Africa, **C. introflexus** is widespread, but infrequent, while **C. pilifera** is rare and so far known only from Table Mountain.

89. Treated by Sim (1926) as a synonym of **C. atroluteus**; recent collections indicate that it is not conspecific.

90. *Vide* Sim (1926) under *C. lepidophyllus* (syn. of **C. introflexus,** *vide* Frahm, 1975). **Campylopus olivaceonigricans** is, however, quite distinct and referable to the subgenus **Thysanomitrium.** *Campylopus edwardii* Sim is conspecific.

91. *Vide* Gradstein & Sipman (1978); not treated by Sim (1926).

92. New to southern Africa. *Vide* Touw *in sched.*, Voucher: Mariepskop, Transvaal, *Vorster* 983, PRE !.

93. *Vide* p. 5.

94. New to southern Africa. *Vide* Touw *in sched.*, Voucher: Mariepskop, Transvaal, *Vorster* 1224Z, PRE !.

95. Examination of type material [*vide* Sim & Dixon (1922); PRE !] indicates that this genus is best placed in DICRANACEAE. The capsule with well developed neck and the ornate spores suggests a close relationship to **Bruchia.** The gametophyte is distinct, but there is no justification for the inclusion of **Cladophascum** in POTTIACEAE, cf. Dixon (1932).

96. *Vide* Bizot & Pócs (1974); original record was from Natal.

97. *Vide* p. 3.

98. Southern African specimens are frequently treated under **H. cylindraceum** *var.* **cucullatum** (Besch.) Wijk & Marg.

99. The original citation (Mitten, 1886) is the only known record for southern Africa.

100. *Vide* Dixon (1932), Syntypes: Deepwalls, Knysna, Cape, *Hoeg* 95, 102, BM; not treated by Sim (1926).

101. Thériot (1929) records this species from the Transvaal (Shiluvane, *Junod* s.n.); *vide* Bizot & Pócs (1974); not treated by Sim (1926).

102. Bizot (1967) records this species from Mount Anderson near Sabie, Transvaal; not treated by Sim (1926).

103. The status of *L. perfalcatum* Sim (p. 182, 1926) is questionable and it is provisionally placed in the synonomy of **L. rehmannii** until additional material can be studied.

104. Dixon (1932) recorded this species for the first time to continental Africa; Voucher: Eshowe, Zululand, *Hoeg* 120, BM; not treated by Sim (1926).

105. The only specimen cited by Sim (p. 165, 1926) is **L. rehmannii.** Additional material has, however, recently been collected, confirming the presence of **L. chrysobasilare** in the flora.

106. This species is provisionally maintained. It is closely related to **L. zeyheri,** the two differing primarily in size (cf. Mueller, 1899).

107. *Vide* Richards & Clear (1967) on **Microcampylopus.**

108. Discussed by Sim (p. 250, 1926) under POTTIACEAE; additional material has been collected confirming placement of **O. erosa** in DICRANACEAE.

109. The holotype of **T. ligulatus,** *vide* Roth (1913), *Rehmann* 22, has not been seen. The isosyntypes at PRE and NH are both **T. mayottensis,** thus explaining Sim's (p. 154, 1926) transfer of **T. ligulatus** to the synonomy of that species. The isosyntype at BM is apparently **T. africanus** (Dixon, *in litt.*) thus resulting in some confusion (cf. Dixon & Wager, 1929) as to the status of **T. ligulatus**; *vide* Schelpe (1979). Roth's (1913) description strongly suggests that his specimen was **T. mayottensis** also.

110. The variability of **T. longicollus** as outlined by Bartram (1939) and Gangulee (1971) would include the South African species **T. africanus, T. divaricatus** and **T. pallidens.**

111. New to the African Continent; *vide* Reese *in sched.*, Voucher: Bloukrans Pass, Cape; *Crosby & Crosby* 10136, PRE !.

112. The report of **O. africana** by Wager (1917) was in error, the specimen does not differ from **O. albidum.**

113. New to South Africa; several recent collections have been identified from indigenous forest in the eastern Transvaal. Voucher: *Smook* 865, PRE !; *vide* P. Varde (1948).

114. New to Africa; recent collections from the Southwestern Cape (cf. *Schelpe* 7781, BOL!) were identified as this recently described Australian species. The ventral lamellae are difficult to detect on South African specimens; several older collections may be referred here; *vide* Stone (1976).

115. *Vide* Delgadillo (1975) for distribution and illustrations.

116. Treated by Sim (1926) in ORTHOTRICHACEAE; examination of the type of *Gymnostomum bewsii* Sim (PRE, holo.!) indicates that it is conspecific with **A. wilmsianum.**

117. Treated by Sim (1926) under *Semibarbula orientalis; vide* Saito (1975).

118. The transfer of *Tortella obtusifolia* Dix. to **Barbula** required the *nom. nov.* **B. umtaliensis** *Magill*; *vide* p. 5.

119. The transfer of *Semibarbula elongata* Hilp. to **Barbula** required the *nom. nov.* **B. zambesiaca** *Magill*; *vide* p. 5.

120. The illustration of **Desmatodon convolutus** (as *Tortula atrovirens*) by Sim (1926) is somewhat misleading, especially the leaf cross section. The most distinctive feature of this small plant is the enlarged ventral costal cells; *vide* Magill, Seabury & Mueller (1974).

121. Treated by Sim (p. 259, 1926) as a species of **Gymnostomum**; this species is closely related to **D. ceratodonteus.**

122. Treated by Sim (1926) in **Gymnostomum**; *vide* p. 5.

123. *Vide* P. Varde (1958); Type: Partridge Point, Cape, *Arnell* 1188; not treated by Sim (1926).

124. Treated by Sim (1926) in **Barbula**; *vide* p. 5.

125. The specimens cited and illustrated by Sim (pp. 258–259, 1926) as *Gymnostomum calcareum* were misidentified; additional material has been collected, however, and referred to **G. aeruginosum;** vide Zander (1977) for synonomy.

126. *Vide* p. 5.

127. Examination of the type of *Gyroweisia latifolia* Dix. indicated that it was a species of **Husnotiella,** resulting in a transfer to that genus; *vide* p. 7.

128. Considered congeneric with **Weissia** by Saito (1975).

129. *Vide* Kindberg (1888) and Mueller (1858), Type: Genadenthal, Cape, *s.l.*; material not seen.

130. Rhodesia and Moçambique only; very closely related to **H. humicola.**

131. Considered congeneric with **Gymnostomum** by Saito (1975), but retained by Zander (1977).

132. This species was described from sterile collections by Dixon (1918); the subsequent description of the sporophyte by Sim (p. 256, 1926) was in error, the specimen (*Sim* 10045, PRE !) was **Zygodon erosus!**

133. The treatment of **Leptodontium** follows Zander (1972).

134. New to South Africa; Voucher: Lesotho, *Killick* 4214, PRE !; for illustrations *vide* Zander (1972).

135. Zander (1972) also records **L. longicaule** *var.* **microruncinatum** (*Dus.*) *Zander* from southern Africa.

136. Cited as "=*Tortula erubescens* (C. Muell.) Broth. *vide* Sim" in *Index Muscorum.* This is in error, however, as Sim's (p. 227, 1926) reference was to *Barbula macowaniana* C. Muell. (Mueller, p. 103, 1899) not **Pottia macowaniana** *C. Muell.* (Mueller, p. 98, 1899)!

137. *Vide* Schelpe (1969) and Scott & Stone (1976); not treated by Sim (1926).

138. *Vide* Brotherus (1902) and Hornschurch (1820); Type: Kankerbay, Cape, *Bergius* s.n.; specimens not seen.

139. *Vide* Dixon & Wager (1929), Type: Stellenbosch, Cape, *Wager* 671; not treated by Sim (1926).

140. New to South Africa. This is the first report of **Timmiella** in southern Africa; four other species are known from central and northern Africa.

141. New to southern Africa; *vide* p. 3.

142. *Vide* Dixon & Wager (1929).

143. *Vide* Brotherus (1902) and Mueller (1849); Type: Swellendam, Cape, *Pappe* 1838; specimens not seen.

144. Specimens have recently been collected (*Magill* 4921A, PRE !) on trees near human habitation; *vide* Anderson (1943). The specimens produce numerous gemmae, but antheridia and archegonia were not found; *vide* Stone (1971).

145. *Vide* Dixon (1932); Type: Vryburg, Cape, *Hoeg* 1; specimens not seen.

146. *Barbula torquatifolia* Geh. was transferred to **Tortula** by Hilpert (1933), *vide* also Dixon (1932). The costal anatomy is that of **Tortula**; *vide* Saito (1975).

147. The treatment of **Trichostomopsis** follows Robinson (1970).

148. *Vide* Dixon & Wager (1929), Type: National Park, Natal, *Wager* 739, PRE !; not treated by Sim (1926).

149. *Vide* Sim (1926) under **Tortella**; *vide* p. 7.

150. *Vide* Sainsbury (1955) and Stone (1977); not treated by Sim (1926).

151. *Vide* Mueller (1899); specimens not seen. It is possible that the South African specimens are **Grimmia apocarpa.** The latter is quite variable in southern Africa and the leaves of plants grown in moist conditions are macroscopically very similar to early illustrations of **R. aciculare.**

152. *Vide* Harvey (1859), Type: Zwartkop River, Uitenhage, Cape, *Zeyher* s.n., specimens not seen.

153. *Vide* p. 7.

154. Although not seen by Sim (1926), he suggested that this might be **E. sessile.** Subsequent investigation indicates, however, that the leaves are denticulate above, costa excurrent and spores ca. ½ the size of **E. sessile.**

155. Sim (1926) separates nine species under *Entosthodon* on the basis of peristome development. Although this approach has been followed by many authors, the separation of **Funaria** and *Entosthodon* is not clear and, in fact, a gradation from one extreme to the other is indicated. We therefore prefer to follow Brotherus (1924) and unite all of the species under **Funaria.**

156. The recent use of *F. marginata* (C. Muell.) Broth, *hom. illeg.* (Bizot & Pócs, 1974) was in error, **F. ampliretis** (C. Muell.) Broth. is the correct name for the South African specimens.

157. *Vide* P. Varde (1959) on **F. bergiana** *var.* **breviseta** P. Vard.

158. Thériot (1929) recorded this species from the Transvaal (Shiluvane, *Junod* 27539); not treated by Sim (1926).

159. This *nom. nov.* was necessary for the transfer of *E. cavifolius* Mitt. *in* Harv. to **Funaria**; *vide* p. 7.

160. *Vide* Brotherus (1902) and Sim (1926), Type: *Prom. Bon. Spei, Breutel* s.n.; specimens not seen.

161. Originally described from Rhodesia, Wager specimens from Kaapmuiden in the eastern Transvaal have recently been referred to this species.

162. *Vide* Geheeb (1896), Type: Comagas, South West Africa, *Schinz* s.n., 1885; specimens not seen.

163. *Vide* p. 7.

164. Specimens have recently been identified from Pretoria (*Wager* PRE-CH1157, PRE !) extending the distribution of this species from the central Transvaal through the Orange Free State to the western Cape.

165. Although the private Wager Collection is housed at PRE, and the specimens originally deposited at the Transvaal Museum have been transferred to PRE, an isotype of **P. africana** has not been located in the collection; *vide* Dixon (1922), Type: Natal, *Wager* s.n., H-BR.

166. The reference of this species to southern Africa (Wijk *et al.* 5: 820, 1969) has not been traced.

167. Specimens have not been seen, however, the description (Geheeb, 1896) indicates **P. spathulatum,** Type: South West Africa, *Schinz* s.n., April 1885.

168. New to southern Africa. Two species have recently been added to the flora, extending the distribution of **Tayloria** to southern Africa; *vide* Koponen & Weber (1972).

169. A misidentified specimen from Natal (*Reid* PRE—CH7211A) was recently identified as **T. isleana** by A. Koponen. This is the first record of **Tayloria** from South Africa and of **T. isleana** to the African Continent; *vide* Koponen & Weber (1972).

170. A recent collection (*Muller* 2613, PRE !) was identified as the first record of **Tayloria** from Rhodesia; *vide* Koponen & Weber (1972); and De Sloover (1973).

171. The treatment of section BRYOIDEAE is after Ochi (1972) except where noted; the genera **Anomobryum** and **Rhodobryum** are maintained.

172. New to South Africa; *vide* Touw *in sched.* Voucher: Mariepskop, Transvaal, *Crosby & Crosby* 7657, PRE !; *vide* Ochi (1972).

173. New to southern Africa. *Vide* Ochi *in sched.*, PRE !, Vouchers: western Lesotho, *Magill* 4157, 4649; *vide* Ochi (1972).

174. Numerous collections at PRE can be referred to this species. At this time, it appears to be distinct from **B. argenteum;** *vide* Ochi (1972).

175. *Vide* Ochi (1972) and Schelpe (1979).

176. New to South Africa; Voucher: George, Cape, *Wager* PRE—CH12153A; *vide* Ochi (1972).

177. New to southern Africa. *Vide* Ochi *in sched.*, PRE !, Voucher: Lesotho, *Magill* 4506A; *vide* Ochi (1972).

178. Not treated by Ochi (1972); *vide* Sim (1926).

179. Ochi (1972) maintains this species, including *B. zuluense* Broth. & Bryhn in synonymy. Andrews (1940) considered this species conspecific with **B. bicolor.**

180. *Vide* Ochi (1972); not treated by Sim (1926).

181. Bizot (1967) provided **B. pocsii** for *Epipterygium diversifolium* when transferring it to **Bryum,** he cites collections from the eastern Transvaal.

182. Not treated by Ochi (1972); *vide* Sim (1926); Type: *Rehmann* 245, BM.

183. *Vide* p. 7.

184. *Vide* P. Varde (1955), Type: Drakensberg, Natal, *Cholonoky* 18; not treated by Sim (1926).

185. *Vide* P. Varde (1959); this species is rare in southern Africa, although it has recently been recollected on Table Mountain, Cape Town (*Magill* 4102, PRE !).

186. New to South Africa. Provisional identification, *vide* Touw *in Sched.*, Voucher: Mariepskop, Transvaal, *Vorster* 1388, 1795 PRE !.

187. The type of this species [*Symons* s.n. (*Sim* 10 208)] has not been located at PRE; *vide* p. 7.

188. *Vide* p. 7.

189. *Vide* Schelpe (1979); *vide* Sim (p. 321, 1926).

190. Ochi (1972) treats **Rhodobryum** under **Bryum**; for South African species *vide* Schelpe (1979).

191. *Vide* Iwatsuki & Koponen (1972) on the taxonomy and distribution of **R. roseum.**

192. *Vide* Koponen (1968) for relationship to **Mnium.**

193. *Vide* Sim (p. 299, 1926); doubtful record.

194. Treated by Sim (1926) as *B. sericea*; *vide* Wijk & Margadant (1959) and Schelpe (1979).

195. *Vide* De Sloover (1975b) for reference to South African species.

196. Including *P. imbricatula* and *P. laxissima* of Sim (1926); *vide* Wijk & Margadant (1959).

197. The treatment of ERPODIACEAE follows Crum (1972).

198. *Vide* Dixon (1931), Type: Soutpansberg, Transvaal, *Wager* 1122; not treated by Sim (1926).

199. *Vide* Robinson (1959).

200. Material under this name at PRE (*vide* Sim, p. 215, 1926) was misidentified and has been referred to **P. crispatum**; *vide* Mueller (1899), Type: Groenekloof, Cape, *Breutel* s.n., 1862; specimens not seen.

201. *Vide* Mueller (1899) and Sim (1926), Type: Jammerlappen, Natal, *Dittrich* s.n., 1898; material not seen.

202. *Vide* p. 3.

203. *Vide* Robinson (1959); not treated by Sim (1926).

204. The treatment of **Macrocoma** follows Vitt (1973).

205. All of Sim's specimens of *Macromitrium confusum* Mitt. were misidentified and have been referred to **Macrocoma tenue**; therefore, *M. confusum* may not be conspecific with **M. lycopodioides** (cf. Sim, p. 279, 1926). Mitten (1886) describes *M. confusum* (citing *Rehmann* 159, 162, 165 B, 166) as dioicous and always larger than **M. lycopodioides.** He also refers *Rehmann* 160 (*M. dawsoniomitrium* C. Muell.) to **M. lycopodioides.**

206. *Vide* Vitt (1973) for relationship to **Macrocoma.**

207. *Vide* Dixon (1932), Syntypes: Eshowe, Zululand, *Hoeg* 121, 122, 146; not treated by Sim (1926).

208. The treatment of **Orthotrichum** follows Lewinsky (1978).

209. *Vide* Lewinsky (1978); not treated by Sim (1926).

210. *Schlotheimia subventrosa* Broth. & Bryhn (1911; Type: H-BR !) is conspecific with **S. ventrosa.** The relationship of the latter and **S. grevilleana** must still be investigated.

211. Specimens of **Ulota phyllantha** Brid. have not been seen from southern Africa, although it is represented on many subantarctic islands included in "*Afr 4*" (cf. Wijk *et al.* 1959–1969). The recent reference for Southern Africa by Seppelt (1978) should be regarded as an "*Afr 4—islands*" record only.

212. The treatment of **Zygodon** follows Malta (1926).

213. *Vide* Robinson (1975).

214. The South African species, **R. capense,** is considered distinct from **R. tomentosum,** *vide* Van Zanten (*in litt.*).

215. This is a very doubtful record for southern Africa, *vide* Sim (1926); South African specimens not seen.

216. *Vide* Bizot & Pócs (1974).

217. New to South Africa; *vide* Griffin, *in sched,* Voucher: Cathkin Peak, Natal, *Crosby & Crosby* 9929, PRE !; *vide* Sim (1926) as *P. rehmannii.*

218. The treatment of PTEROBRYACEAE follows Argent (1973 A, B).

219. *Vide* Argent (1973 A) and Dixon & Wager (1929); not treated by Sim (1926).

220. New to Southern Africa; *vide* Touw *in sched.,* voucher: Eshowe, Natal, *Crosby & Crosby* 7799, PRE !.

221. *Vide* p. 5.

222. Three species of **Pilotrichella** are provisionally included in the flora on the bases of descriptions and recent collections.

223. Bizot & Pócs (1974) refer this species and **C. politum** (Hook. f. & Wils.) Dus. ex Broth. to the synonomy of **C. nitens** (Brid.) Card.

224. *Vide* Dixon (1916), Type: ? Cape Town, *Webster* 710, BM.

225. The PRE specimens cited by Sim (1926) as **P. comorense** were either **P. hildebrandtii** or **P. pennaefrondeum.**

226. *Vide* Touw (1976).

227. *Vide* Crosby (1976); *vide* Bizot & Pócs (1974).

228. *Vide* P. Varde (1959), Voucher: Knysna, Cape, *Arnell* 1923; cf. De Sloover (1975A); not treated by Sim (1926).

229. *Vide* Dixon (1932), Syntypes: Eshowe, Zululand, *Hoeg* 127, 149; not treated by Sim (1926).

230. New to southern Africa. A specimen from southern Zululand has been provisionally identified as this east African species; *vide* Touw *in Sched.,* Voucher: Eshowe, Natal, *Crosby & Crosby* 7786, PRE !.

231. **Fabronia pilifera Complex.** The species included in this complex are separated on the bases of marginal dentation and acumen length—characters that appear to be quite variable. Five species are provisionally maintained in this complex; **F. abyssinica, F. leikipiae, F. perciliata, F. pilifera** and **F. rehmannii.**

232. *Vide* Mueller (1859), Type: Soutkloof, Cape, *Breutel* s.n.; specimens not seen.

233. *Vide* Mueller (1859), Type: *Prom. Bon. Spei, Ecklon* s.n.; specimens not seen.

234. Sim (1926) refers this to the synonomy of **F. abyssinica** on the basis of Dixon's (1922) observations. The species is provisionally maintained in the **Fabronia pilifera Complex**—231.

235. *Vide* Schelpe (1979); treated by Sim (1926) as *I. seriolus* (C. Muell.) C. Muell.

236. *Vide* Dixon (1932), Type: Muashitu, Zaire, *Overlaet* 623. The South African specimen was collected by Hoeg (Eshowe, Zululand, 130).

237. This is very similar to **Lindbergia,** however **Leskeella** is described as dioicous. The sexual condition could not be confirmed or disputed by examination of the type (Entumene, Zululand, *H. Bryhn* s.n., April 1908, H-BR !).

238. Thériot (1929) also transferred this species to **Pseudoleskeopsis,** but it has been retained in **Pseudoleskea** by Wijk *et al.* (1959-1969). Dixon (1929) suggested that *Pseudoleskea capilliramea* should also be transferred, Sim (1926) considered it conspecific with **P. leskeoides.**

239. *Vide* Thériot (1929); also Dixon (1929).

240. *Vide* Dixon (1932), Type: Dordrecht, Cape, *Hoeg* 86; not treated by Sim (1926).

241. New to southern Africa; specimens recently collected at Sani Pass, Lesotho, alt. 2 850 m, (Voucher: *Magill* 4514) are the first record of this taxon for the Southern Hemisphere; *vide* Touw *in sched.,* PRE !.

242. The treatment of **Thuidium** follows Touw (1976).

243. Rhodesia and Moçambique; *vide* Touw (1976) for distribution.

244. Treated by Sim (1926) under **Hygroamblystegium;** the specimen (*Sim* 8670) was reported by Dixon (1920) as **H. fluvatile** (Hedw.) Loesk.

245. *Vide* Magill (1978).

246. **Brachythecium implicatum Complex.** Three species, **B. implicatum, B. pinnatum** and **B. subrutabulum,** are provisionally maintained in the flora as members of this complex. The species, although very similar, show differences in median leaf cell length.

247. Bizot & Pócs (1974) retain *B. sticto-patens* C. Muell. stating it is "very closely allied to **B. populeum**".

248. *Vide* Dixon in Sim (p. 371, 1926) for short discussion.

249. New to southern Africa. *Vide* Touw *in Sched.,* Vouchers: *Vorster* 1314, 1317, PRE !. In addition to these records from the eastern Transvaal, the specimen reported as *R. algiriana* (Brid.) Broth. from Natal (Dixon & Wager, 1929) also belongs here.

250. After examination of specimens in the Brotherus Collection (H-BR), it was concluded that this species is indeed distinct from **R. zeyheri.**

251. Examination of type material (Eshowe, Zululand, *H. Bryhn* s.n., January 1909, H-BR !) indicates that this is not conspecific with **R. brachypterum** as suggested by Sim (1926).

252. The reference for this species in southern Africa (Wijk *et al.*, 5: 599, 1969) has not been traced.

253. The reference of **E. rotundifolium** to southern Africa (Schelpe, 1979) is in error. The PRE specimen (*Sim* 8776) cited as *E. abruptum* by Sim (p. 406, 1926; also Sim & Dixon, 1922) does not differ from central African specimens of **E. subjulaceum.** Several recent collections from the eastern Transvaal and Swaziland have also been placed here.

254. Dixon (1920) refers the African specimens to **L. fabroniacea** *var.* **abyssinica** (Broth.) Dix. after comparison with Indian material.

255. Dixon (1916) has suggested that **T. fabronioides** may be a variable species and all specimens should be referred there; *vide* Sim (1926). The South African specimens, however, appear distinct and all three species are provisionally maintained.

256. *Vide* p. 7.

257. *Vide* Brotherus (1902); *vide* Jager in Paris (1898), Type: *Prom. Bon. Spei*, *Bergius* s.n.; specimen not seen.

258. *Vide* p. 7.

259. New to Rhodesia, Voucher: Inyanga, *Mueller* 2632, PRE !. The Rhodesian specimens are strongly papillose. Recent collections from Zululand frequently have leaf cells very weakly papillose.

260. *Vide* Crum (1971); Rhodesia only, South African specimens were misidentified, *vide* Sim (1926).

261. *Vide* p. 7.

262. Rhodesia Only. The specimens examined have very few paraphyllia; none of the specimens seen have numerous paraphyllia as illustrated by Sim (p. 425, 1926).

263. Specimens of **Leptohymenium** from southern Africa have not been seen; *vide* Sim (p. 417–418, 1926).

264. New to South Africa. Several recent collections from the eastern Transvaal have been provisionally identified as this species, *vide* Touw *in Sched.*, Voucher: Eshowe, Natal, *Crosby & Crosby* 7786, PRE !.

265. New to southern Africa. *Vide* Schelpe (1979), Voucher: Swartberg Pass, Cape, *Schelpe* 4600, BOL !.

266. *Vide* Schelpe (1979), Voucher: Cape, *Esterhuysen* 16098, BOL !.

267. Thériot (1929) refers a specimen from the eastern Transvaal (Voucher: Maromye, *Junod* 2605) to **P. subformosum** Besch. *var.* **anomalum** Thér.

268. Examination of type material of *B. peristomata* (isosyntypes, PRE !; cf. Sim & Dixon, 1922) shows it to be conspecific with **Leucodon maritimus.**

269. Both specimens (*Sim* s.n., 7232) cited by Sim (1926) under this name were misidentified and have been referred to **Hookeriopsis pappeana,** as no other specimens have been found, **C. laetevirens** is excluded from the flora.

270. The characters emphasized by Dixon (1916) when describing *E. brevirameus* are also found in various specimens of **E. dregeanus.** In addition, the ornamentation on the peristome teeth of the type, is quite variable. We feel that the two species can not be satisfactorily separated and place *E. brevirameus* into the synonomy of **E. dregeanus.**

271. Examination of *Hyophila cyathiformis* (isotype, PRE !) shows it to be conspecific with **Hypodontium dregei.**

272. *Vide* Touw (1962); after examination of the label of the specimen cited for South Africa (NY !) and the itinerary of several collectors, it was concluded that the collector and locality were transposed. The citation should read—*Balfour* 64, Rodriguez "Island".

273. The reference of **O. subimbricata** to southern Africa is incorrect. The specimens cited by Sim (1926) as *Pilotrichella chrysoneura* have been identified as other species of **Pilotrichella.**

274. The type of *P. natalensis* (*Sim* 8703, PRE, holo. !) does not differ from **T. bicolor.**

275. The syntypes (*Henderson* 366, 365, PRE, isosyn. !) do not differ from **E. dregeanus.**

276. The specimens cited under this name; *vide* Schelpe (1979); were misidentified and have been referred to **R. sublaevipes**; cf. Dixon & Wager (1929) as *R. algiriana.*

277. The Transvaal specimens were misidentified, *vide* Sim (1926); the Rhodesian specimens have been referred to **Barbula zambesiaca** Magill; *vide* Sim & Dixon (1922) as *B. elongata* Dix. *hom. illeg.*

278. The South African specimens placed by Sim (1926) in **Trichostomum inclinatum** were misidentified. The specimens are **Hypodontium dregei.**

6. ALPHABETICAL LIST OF SOUTHERN AFRICAN FAMILIES

ACROBOLBACEAE (H20)
ADELANTHACEAE (H27)
AMBLYSTEGIACEAE (73)
ANDREAEACEAE (2)
ANEURACEAE (H12)
ANTHELIACEAE (H29)
ANTHOCEROTACEAE (A1)
ARCHIDIACEAE (4)
ARNELLIACEAE (H24)
AULACOMNIACEAE (34)
AYTONIACEAE (H2)

BARTRAMIACEAE (37)
BRACHYTHECIACEAE (74)
BRYACEAE (24)
BRYOBARTRAMIACEAE (14A)

CALYMPERACEAE (12)
CALYPOGEJACEAE (H30)
CEPHALOZIACEAE (H26)
CEPHALOZIELLACEAE (H28)
CLEVEACEAE (H5)
CODONIACEAE (H11)
CRYPHAEACEAE (48)

DICRANACEAE (8)
DITRICHACEAE (5)

ENCALYPTACEAE (13)
ENTODONTACEAE (75)
EPHEMERACEAE (18)
ERPODIACEAE (40)
EUSTICHIACEAE (28)
EXORMOTHECACEAE (H4)

FABRONIACEAE (70)
FISSIDENTACEAE (3)
FONTINALACEAE (45)
FUNARIACEAE (19)

GIGASPERMACEAE (16)
GRIMMIACEAE (15)
GYMNOMITRIACEAE (H21)

HEDWIGIACEAE (47)
HERBERTACEAE (H33)
HOOKERIACEAE (65)
HYLOCOMIACEAE (80)
HYPNACEAE (78)

JUBULACEAE (H17)
JUNGERMANNIACEAE (H19)

LEJEUNEACEAE (H18)
LEMBOPHYLLACEAE (61)
LEPICOLEACEAE (H32)
LEPIDOZIACEAE (H31)
LESKEACEAE (71)
LEUCODONTACEAE (49)
LOPHOCOLEACEAE (H25)
LUNULARIACEAE (H3)

MARCHANTIACEAE (H6)
MEESIACEAE (35)
METEORIACEAE (58)
METZGERIACEAE (H13)
MNIACEAE (26)

NANOBRYACEAE (3A)
NECKERACEAE (60)

ORTHOTRICHACEAE (42)
OXYMITRACEAE (H7)

PALLAVICINIACEAE (H14)
PHYLLOGONIACEAE (59)
PLAGIOCHILACEAE (H23)
PLAGIOTHECIACEAE (76)
POLYTRICHACEAE (83)
PORELLACEAE (H16)
POTTIACEAE (14)
PRIONODONTACEAE (53)
PTEROBRYACEAE (57)
PTYCHOMITRIACEAE (41)

RACOPILACEAE (44)
RADULACEAE (H15)
RHABDOWEISIACEAE (42A)
RHACHITHECIACEAE (40A)
RHIZOGONIACEAE (32)
RICCIACEAE (H8)
RIELLACEAE (H10)

SCHISTOCHILACEAE (H22)
SEMATOPHYLLACEAE (77)
SPHAEROCARPACEAE (H9)
SPHAGNACEAE (1)
SPLACHNACEAE (21)

TARGIONIACEAE (H1)
THUIDIACEAE (72)
TRACHYPODACEAE (55)

WARDIACEAE (45A)

7. ALPHABETICAL LIST OF SOUTHERN AFRICAN GENERA WITH REFERENCE TO FAMILIES

Abietinella *C. Muell.*	THUIDIACEAE (72)
Acaulon *C. Muell.*	POTTIACEAE (14)
Acrobolbus *Nees*	ACROBOLBACEAE (H20)
Acromastigium *Evans*	LEPIDOZIACEAE (H31)
Adelanthus *Mitt.*	ADELANTHACEAE (H27)
Aerobryopsis *Fleisch.*	METEORIACEAE (58)
Alobiella *Spruce*	CEPHALOZIACEAE (H26)
Aloina *Kindb.*	POTTIACEAE (14)
Amblyodon *B.S.G.*	MEESIACEAE (35)
Amphidium *Schimp.*	RHABDOWEISIACEAE (42A)
Anastrophyllum (*Spruce*) *Steph.*	JUNGERMANNIACEAE (H19)
Andreaea *Hedw.*	ANDREAEACEAE (2)
Anisothecium *Mitt.*	DICRANACEAE (8)
Anoectangium *Schwaegr.*	POTTIACEAE (14)
Anomalolejeunea *Schiffn.*	LEJEUNEACEAE (H18)
Anomobryum *Schimp.*	BRYACEAE (24)
Anthelia *Dum.*	ANTHELIACEAE (H29)
Anthoceros *L.*	ANTHOCEROTACEAE (A1)
Antitrichia *Brid.*	LEUCODONTACEAE (49)
Aongstroemia *B.S.G.*	DICRANACEAE (8)
Aphanolejeunea *Evans*	LEJEUNEACEAE (H18)
Arachniopsis *Spruce*	LEPIDOZIACEAE (H31)
Archidium *Brid.*	ARCHIDIACEAE (4)
Archilejeunea *Steph.*	LEJEUNEACEAE (H18)
Asterella *P. Beauv.*	AYTONIACEAE (H2)
Athalamia *Falc.*	CLEVEACEAE (H5)
Atrichum *P. Beauv.*	POLYTRICHACEAE (83)
Aulacopilum *Wils.*	ERPODIACEAE (40)
Barbula *Hedw.*	POTTIACEAE (14)
Bartramia *Hedw.*	BARTRAMIACEAE (37)
Bartramidula *B.S.G.*	BARTRAMIACEAE (37)
Bazzania *S. Gray*	LEPIDOZIACEAE (H31)
Brachiolejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Brachymenium *Schwaegr.*	BRYACEAE (24)
Brachythecium *B.S.G.*	BRACHYTHECIACEAE (74)
Braunia *B.S.G.*	HEDWIGIACEAE (47)
Breutelia (*B.S.G.*) *Schimp.*	BARTRAMIACEAE (37)
Bruchia *Schwaegr.*	DICRANACEAE (8)
Bryobartramia *Sainsb.*	BRYOBARTRAMIACEAE (14A)
Bryum *Hedw.*	BRYACEAE (24)
Callicostella (*C. Muell.*) *Mitt.*	HOOKERIACEAE (65)
Calymperes *Sw. in Web.*	CALYMPERACEAE (12)
Calypogeja *Raddi*	CALYPOGEJACEAE (H30)
Calyptothecium *Mitt.*	PTEROBRYACEAE (57)
Calyptrochaeta *Desv.*	HOOKERIACEAE (65)
Campylopus *Brid.*	DICRANACEAE (8)
Catagonium *C. Muell.* ex *Broth.*	PHYLLOGONIACEAE (59)
Caudalejeunea *Steph.*	LEJEUNEACEAE (H18)
Cephalozia (*Dum.*) *Dum.*	CEPHALOZIACEAE (H26)
Cephaloziella (*Spruce*) *Schiffn.*	CEPHALOZIELLACEAE (H28)

Ceratodon *Brid.*	DITRICHACEAE (5)
Chamaebryum *Thér. & Dix.*	GIGASPERMACEAE (16)
Chandonanthus *Mitt.*	JUNGERMANNIACEAE (H19)
Cheilolejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Chiloscyphus *Corda*	LOPHOCOLEACEAE (H25)
Cladophascum *Dix.* in *Sim*	DICRANACEAE (8)
Clasmatocolea *Spruce*	LOPHOCOLEACEAE (H25)
Cololejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Colura *Dum.*	LEJEUNEACEAE (H18)
Cratoneuron (*Sull.*) *Spruce*	AMBLYSTEGIACEAE (73)
Cryphaea *Mohr in Web.*	CRYPHAEACEAE (48)
Cyathodium *Kunze*	TARGIONIACEAE (H1)
Cyclodictyon *Mitt.*	HOOKERIACEAE (65)
Desmatodon *Brid.*	POTTIACEAE (14)
Dicranella (*C. Muell.*) *Schimp.*	DICRANACEAE (8)
Dicranolejeunea *Steph.*	LEJEUNEACEAE (H18)
Dicranoloma (*Ren.*) *Ren.*	DICRANACEAE (8)
Didymodon *Hedw.*	POTTIACEAE (14)
Dimerodontium *Mitt.*	FABRONIACEAE (70)
Diplasiolejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Distichium *B.S.G.*	DITRICHACEAE (5)
Distichophyllum *Dozy & Molk.*	HOOKERIACEAE (65)
Ditrichum *Hampe*	DITRICHACEAE (5)
Drepanocladus (*C. Muell.*) *G. Roth.*	AMBLYSTEGIACEAE (73)
Drepanolejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Dumortiera *Nees*	MARCHANTIACEAE (H6)
Eccremidium *Wils.*	DITRICHACEAE (5)
Ectropothecium *Mitt.*	HYPNACEAE (78)
Encalypta *Hedw.*	ENCALYPTACEAE (13)
Entodon *C. Muell.*	ENTODONTACEAE (75)
Ephemerum *Hampe*	EPHEMERACEAE (18)
Erpodium (*Brid.*) *Brid.*	ERPODIACEAE (40)
Erythrodontium *Hampe*	ENTODONTACEAE (75)
Eucladium *B.S.G.*	POTTIACEAE (14)
Eustichia (*Brid.*) *Brid.*	EUSTICHIACEAE (28)
Exormotheca *Mitt.*	EXORMOTHECACEAE (H4)
Fabronia *Raddi*	FABRONIACEAE (70)
Fissidens *Hedw.*	FISSIDENTACEAE (3)
Floribundaria *Fleisch.*	METEORIACEAE (58)
Fontinalis *Hedw.*	FONTINALACEAE (45)
Forsstroemia *Lindb.*	CRYPHAEACEAE (48)
Fossombronia *Raddi*	CODONIACEAE (H11)
Frullania *Raddi*	JUBULACEAE (H17)
Funaria *Hedw.*	FUNARIACEAE (19)
Gigaspermum *Lindb.*	GIGASPERMACEAE (16)
Gongylanthus *Nees*	ARNELLIACEAE (H24)
Goniomitrium *Hook. & Wils.*	FUNARIACEAE (19)
Grimmia *Hedw.*	GRIMMIACEAE (15)
Gymnomitrion *Corda*	GYMNOMITRIACEAE (H21)
Gymnostomum *Nees & Hornsch.*	POTTIACEAE (14)

Haplocladium (*C. Muell.*) *C. Muell.*	THUIDIACEAE (72)
Haplodontium *Hampe*	BRYACEAE (24)
Haplohymenium *Dozy & Molk.*	THUIDIACEAE (72)
Hedwigia *P. Beauv.*	HEDWIGIACEAE (47)
Hedwigidium *B.S.G.*	HEDWIGIACEAE (47)
Helicodontium *Schwaegr.*	FABRONIACEAE (70)
Herbertus *S. Gray*	HERBERTACEAE (H33)
Herpetineuron (*C. Muell.*) *Card.*	THUIDIACEAE (72)
Heterophyllium (*Schimp.*) *Kindb.*	SEMATOPHYLLACEAE (77)
Holomitrium *Brid.*	DICRANACEAE (8)
Hookeriopsis (*Besch.*) *Jaeg.*	HOOKERIACEAE (65)
Husnotiella *Card.*	POTTIACEAE (14)
Hygroamblystegium *Loeske*	AMBLYSTEGIACEAE (73)
Hymenostomum *R. Br.*	POTTIACEAE (14)
Hymenostylium *Brid.*	POTTIACEAE (14)
Hyophila *Brid.*	POTTIACEAE (14)
Hypnofabronia *Dix.*	FABRONIACEAE (70)
Hypnum *Hedw.*	HYPNACEAE (78)
Hypodontium *C. Muell.*	CALYMPERACEAE (12)
Hypopterygium *Brid.*	HOOKERIACEAE (65)
Inflatolejeunea *S. Arnell*	LEJEUNEACEAE (H18)
Ischyrodon *C. Muell.*	FABRONIACEAE (70)
Isopterygium *Mitt.*	HYPNACEAE (78)
Isotachis *Mitt.*	JUNGERMANNIACEAE (H19)
Jaegerina *C. Muell.*	PTEROBRYACEAE (57)
Jamesoniella (*Spruce*) *Carring.*	JUNGERMANNIACEAE (H19)
Jungermannia *L.*	JUNGERMANNIACEAE (H19)
Kurzia *Von Martens*	LEPIDOZIACEAE (H31)
Lejeunea *Lib.*	LEJEUNEACEAE (H18)
Lepicolea *Dum.*	LEPICOLEACEAE (H32)
Lepidopilidium (*C. Muell.*) *Broth.*	HOOKERIACEAE (65)
Lepidozia *Dum.*	LEPIDOZIACEAE (H31)
Leptobryum (*B.S.G.*) *Wils.*	BRYACEAE (24)
Leptocolea *Evans*	LEJEUNEACEAE (H18)
Leptodictyum (*Schimp.*) *Warnst.*	AMBLYSTEGIACEAE (73)
Leptodon *Mohr*	NECKERACEAE (60)
Leptodontium (*C. Muell.*) *Hampe* ex *Lindb.*	POTTIACEAE (14)
Leptohymenium *Schwaegr.*	HYLOCOMIACEAE (80)
Leptoischyrodon *Dix.*	FABRONIACEAE (70)
Leptoscyphus *Mitt.*	PLAGIOCHILACEAE (H23)
Leptostomum *R. Br.*	BRYACEAE (24)
Leptotheca *Schwaegr.*	AULACOMNIACEAE (34)
Leskeella (*Limpr.*) *Loeske*	LESKEACEAE (71)
Leskeodon *Broth.*	HOOKERIACEAE (65)
Lethocolea *Mitt.*	ACROBOLBACEAE (H20)
Leucobryum *Hampe*	DICRANACEAE (8)
Leucodon *Schwaegr.*	LEUCODONTACEAE (49)
Leucolejeunea *Evans*	LEJEUNEACEAE (H18)
Leucoloma *Brid.*	DICRANACEAE (8)
Levierella *C. Muell.*	ENTODONTACEAE (75)
Lindbergia *Kindb.*	LESKEACEAE (71)
Lophocolea (*Dum.*) *Dum.*	LOPHOCOLEACEAE (H25)
Lopholejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Lophozia (*Dum.*) *Dum.*	JUNGERMANNIACEAE (H19)
Lopidium *Hook. f. & Wils.*	HOOKERIACEAE (65)
Lunularia *Adans.*	LUNULARIACEAE (H3)
Macrocoma (*C. Muell.*) *Grout*	ORTHOTRICHACEAE (42)
Macromitrium *Brid.*	ORTHOTRICHACEAE (42)
Mannia *Opiz*	AYTONIACEAE (H2)
Marchantia *L.*	MARCHANTIACEAE (H6)
Marchesinia *S. Gray*	LEJEUNEACEAE (H18)
Marsupella *Dum.*	GYMNOMITRIACEAE (H21)
Marsupidium *Mitt.*	ACROBOLBACEAE (H20)
Mastigolejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Meiothecium *Mitt.*	SEMATOPHYLLACEAE (77)
Metzgeria *Raddi*	METZGERIACEAE (H13)
Microcampylopus (*C. Muell.*) *Fleisch.*	DICRANACEAE (8)
Microdus *Schimp. in Besch.*	DICRANACEAE (8)
Microlejeunea *Steph.*	LEJEUNEACEAE (H18)
Microlepidozia *Spruce*	LEPIDOZIACEAE (H31)
Micropoma *Lindb.*	FUNARIACEAE (19)
Mielichhoferia *Nees & Hornsch.*	BRYACEAE (24)
Mittenothamnium *Henn.*	HYPNACEAE (78)
Mniobryum *Limpr.*	BRYACEAE (24)
Nanobryum *Dix.*	NANOBRYACEAE (3A)
Neckera *Hedw.*	NECKERACEAE (60)
Notoscyphus *Mitt.*	JUNGERMANNIACEAE (H19)
Octoblepharum *Hedw.*	CALYMPERACEAE (12)
Odontoschisma (*Dum.*) *Dum.*	ADELANTHACEAE (H27)
Oedipodiella *Dix.*	GIGASPERMACEAE (16)
Oreoweisia (*B.S.G.*) *De Not.*	DICRANACEAE (8)
Orthodontium *Schwaegr.*	BRYACEAE (24)
Orthostichopsis *Broth.*	PTEROBRYACEAE (57)
Orthotrichum *Hedw.*	ORTHOTRICHACEAE (42)
Oxymitra *Bisch.*	OXYMITRACEAE (H7)
Oxyrrhynchium (*B.S.G.*) *Warnst.*	BRACHYTHECIACEAE (74)
Oxystegus (*Limpr.*) *Hilp.*	POTTIACEAE (14)
Palamocladium *C. Muell.*	BRACHYTHECIACEAE (74)
Pallavicinia *S. Gray*	PALLAVICINIACEAE (H14)
Paludella *Ehrh.* ex *Brid.*	MEESIACEAE (35)
Papillaria (*C. Muell.*) *C. Muell.*	METEORIACEAE (58)
Phaeoceros *Prosk.*	ANTHOCEROTACEAE (A1)
Phascum *Hedw.*	POTTIACEAE (14)
Philonotis *Brid.*	BARTRAMIACEAE (37)
Phragmilejeunea *Schust.*	LEJEUNEACEAE (H18)
Physcomitrellopsis *Broth. & Wag.* ex *Dix.*	FUNARIACEAE (19)
Physcomitrium (*Brid.*) *Brid.*	FUNARIACEAE (19)
Pilotrichella (*C. Muell.*) *Besch.*	METEORIACEAE (58)
Pinnatella *Fleisch.*	NECKERACEAE (60)
Plagiochasma *Lehm. & Lindenb.*	AYTONIACEAE (H2)

Plagiochila *Dum.*	PLAGIOCHILACEAE (H23)
Plagiomnium *T. Kop.*	MNIACEAE (26)
Plagiothecium *B.S.G.*	PLAGIOTHECIACEAE (76)
Platyhypnidium *Fleisch.*	AMBLYSTEGIACEAE (73)
Pleuridium *Rabenh.*	DITRICHACEAE (5)
Pogonatum *P. Beauv.*	POLYTRICHACEAE (83)
Pohlia *Hedw.*	BRYACEAE (24)
Polytrichum *Hedw.*	POLYTRICHACEAE (83)
Porella *L.*	PORELLACEAE (H16)
Porothamnium *Fleisch.*	NECKERACEAE (60)
Pottia (*Reichenb.*) *Fuernr.*	POTTIACEAE (14)
Prionodon *C. Muell.*	PRIONODONTACEAE (53)
Prionolejeunea *Steph.*	LEJEUNEACEAE (H18)
Pseudoleskea *B.S.G.*	LESKEACEAE (71)
Pseudoleskeopsis *Broth.*	LESKEACEAE (71)
Psiloclada *Mitt.*	LEPIDOZIACEAE (H31)
Psilopilum *Brid.*	POLYTRICHACEAE (83)
Pterobryopsis *Fleisch.*	PTEROBRYACEAE (57)
Pterogonium *Sw.*	LEUCODONTACEAE (49)
Pterygoneurum *Jur.*	POTTIACEAE (14)
Ptychanthus *Nees*	LEJEUNEACEAE (H18)
Ptychocoleus *Trev.*	LEJEUNEACEAE (H18)
Ptychomitriopsis *Dix.*	PTYCHOMITRIACEAE (41)
Ptychomitrium *Fuernr.*	PTYCHOMITRIACEAE (41)
Racomitrium *Brid.*	GRIMMIACEAE (15)
Racopilum *P. Beauv.*	RACOPILACEAE (44)
Radula *Dum.*	RADULACEAE (H15)
Rauiella *Reim.*	THUIDIACEAE (72)
Reboulia *Raddi*	AYTONIACEAE (H2)
Rectolejeunea *Evans*	LEJEUNEACEAE (H18)
Rhabdoweisia *B.S.G.*	RHABDOWEISIACEAE (42A)
Rhachithecium *Broth.* ex *Le'Jol.*	RHACHITHECIACEAE (40A)
Rhacocarpus *Lindb.*	HEDWIGIACEAE (47)
Rhizogonium *Brid.*	RHIZOGONIACEAE (32)
Rhodobryum *Hampe*	BRYACEAE (24)
Rhynchostegiella (*B.S.G.*) *Limpr.*	BRACHYTHECIACEAE (74)
Rhynchostegium *B.S.G.*	BRACHYTHECIACEAE (74)
Riccardia *S. Gray*	ANEURACEAE (H12)
Riccia *L.*	RICCIACEAE (H8)
Ricciocarpos *Corda*	RICCIACEAE (H8)
Riella *Mont.*	RIELLACEAE (H10)
Rigodium *Kunze* ex *Schwaegr.*	LEMBOPHYLLACEAE (61)
Saelania *Lindb.*	DITRICHACEAE (5)
Schistochila *Dum.*	SCHISTOCHILACEAE (H22)
Schlotheimia *Brid.*	ORTHOTRICHACEAE (42)
Sciaromium (*Mitt.*) *Mitt.*	AMBLYSTEGIACEAE (73)
Sematophyllum *Mitt.*	SEMATOPHYLLACEAE (77)
Sphaerocarpos *Boeh.*	SPHAEROCARPACEAE (H9)
Sphagnum *L.*	SPHAGNACEAE (1)
Squamidium (*C. Muell.*) *Broth.*	METEORIACEAE (58)
Stephaniella *Jack*	GYMNOMITRIACEAE (H21)
Stereophyllum *Mitt.*	PLAGIOTHECIACEAE (76)
Strepsilejeunea *Steph.*	LEJEUNEACEAE (H18)
Stylolejeunea *Sim.*	LEJEUNEACEAE (H18)
Symphyogyna *Nees & Mont.*	PALLAVICINIACEAE (H14)
Syrrhopodon *Schwaegr.*	CALYMPERACEAE (12)
Targionia *L.*	TARGIONIACEAE (H1)
Taxilejeunea (*Spruce*) *Schiffn.*	LEJEUNEACEAE (H18)
Tayloria *Hook.*	SPLACHNACEAE (21)
Telaranea *Spruce*	LEPIDOZIACEAE (H31)
Tetrapterum *Hampe* ex *Jaeg.*	POTTIACEAE (14)
Thuidium *B.S.G.*	THUIDIACEAE (72)
Thysananthus *Lindenb.*	LEJEUNEACEAE (H18)
Timmiella (*De Not.*) *Limpr.*	POTTIACEAE (14)
Tortella (*Lindb.*) *Limpr.*	POTTIACEAE (14)
Tortula *Hedw.*	POTTIACEAE (14)
Trachyphyllum *Gepp in Hiern.*	ENTODONTACEAE (75)
Trachypodopsis *Fleisch.*	TRACHYPODACEAE (55)
Trachypus *Reinw. & Hornsch.*	TRACHYPODACEAE (55)
Trematodon *Michx.*	DICRANACEAE (8)
Trichosteleum *Mitt.*	SEMATOPHYLLACEAE (77)
Trichostomopsis *Card.*	POTTIACEAE (14)
Trichostomum *Bruch.*	POTTIACEAE (14)
Triquetrella *C. Muell.*	POTTIACEAE (14)
Tylimanthus *Mitt.*	PLAGIOCHILACEAE (H23)
Ulota *Mohr*	ORTHOTRICHACEAE (42)
Vesicularia (*C. Muell.*) *C. Muell.*	HYPNACEAE (78)
Wardia *Harv. & Hook.*	WARDIACEAE (45A)
Weisiopsis *Broth.*	POTTIACEAE (14)
Weissia *Hedw.*	POTTIACEAE (14)
Wijkia *Crum*	SEMATOPHYLLACEAE (77)
Zygodon *Hook. & Tayl.*	ORTHOTRICHACEAE (42)

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ADDENDA

Unfortunately the family MONOCARPACEAE was omitted from the text. The following insertions are therefore required:

Page 8 Insert:

MONOCARPACEAE (H8a)

CARRPOS *Prosk.*
sphaerocarpos (*D. J. Carr*) *Prosk.* 5a

Page 26 Insert:
5a. *Vide* Schelpe (1969); not treated by Sim (1926).

Page 33 Insert:

MONOCARPACEAE (H8a)

Page 34 Insert:
Carrpos *Prosk.* .....MONOCARPACEAE (H8a)